Supplementary Information

Mass Defect-based Carbonyl Activated Tags (mdCATs) for Multiplex Data-independent Acquisition Proteome Quantification

Siwen Zhang,[a‡] Yi Di,[a‡] Jun Yao,[a] Yingjie Wang,[c] Hong Shu,[d] Guoquan Yan,[a] Lei Zhang,[a] and Haojie Lu[*a b]

[a]Institutes of Biomedical Sciences and NHC Key Laboratory of Glycoconjugates Research, Fudan University. Shanghai 200032, China. E-mail: luhaojie@fudan.edu.cn

[b]Shanghai Cancer Center and Department of Chemistry, Fudan University. Shanghai 200032, China.

[c]State Key Laboratory of Bioorganic and Natural Products Chemistry, Center for Excellence in Molecular Synthesis, Shanghai Institute of Organic Chemistry, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai, 200032, P. R. China.

[d]Department of Clinical Laboratory, Cancer Hospital of Guangxi Medical University, Nanning, 530021, Guangxi, China.

[‡]The authors contribute equally to this work.

Corresponding Authors:

* Haojie Lu, Phone: (+) 86-21-54237618. Fax: (+) 86-21-54237961. E- mail: luhaojie@fudan.edu.cn

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MATERIALS AND METHODS

Materials and Chemicals

Formaldehyde (CH_2O), formaldehyde-d2 (CD_2O), formaldehyde-^{13}C, d2 solution ($D^{13}CDO$), 4-(4,6-Dimethoxy-1,3,5-triazin-2-yl)-4-morpholinium tetrafluoroborate (DMTMM), N-methylmorpholine (NMM), sodium cyanoborohydride ($NaCNBH_3$), sodium cyanoborodeuteride ($NaCNBD_3$), N-alpha-(tert-Butoxycarbonyl)-L-lysine （Boc-lysine-OH）, deuterium oxide (D_2O), dithiothreitol (DTT), iodoacetamide (IAA), acetonitrile (ACN), trifluoroacetic acid (TFA), formic acid (FA), and triisopropylsilane (TIS) were obtained from Sigma-Aldrich (St. Louis, MO). All isotopic reagents for the synthesis of acetylated lysine including acetic anhydrides (acetic anhydride 1,1',2,2'-$^{13}C_4$ and acetic anhydride 1,1'-$^{13}C_2$) and L-lysine-2HCl (L-lysine-2HCl $^{13}C_6$, L-lysine-2HCl $^{13}C_6$, $^{15}N_2$, L-lysine-2HCl 4,4,5,5-D_4 and L-lysine-2HCl 3,3,4,4,5,5,6,6-D_8) were purchased from Cambridge Isotopes (Cambridge, MA). Dichloromethane (DCM), N,N-dimethylformamide (DMF), and pyridine was bought from Shanghai Chemical Reagent Co., Ltd. (Shanghai, China). BL21 (DE3)-competent E. coli was from Merck &Co. Inc. Pierce™ BCA Protein Assay Kit was obtained from ThermoFisher Scientific (San Jose, CA). Distilled water was purified with a Milli-Q system (Waters Corp., Milford, MA). Serum samples were generously provided by Department of Clinical Laboratory, Cancer Hospital of Guangxi Medical University. Trypsin for cell culture was acquired from Beijing HuaLishi Technologies Co., Ltd. (Beijing, China). The standard peptides (ESTLHLVLR) were synthesized from TOP-peptide Co., Ltd. (Shanghai, China) with stated purities of >95%. Isotopic mdCATs were purified by one C18 column from HALO.

Synthesis of Mass Defect-based Carboxyl-Active Tag (mdCAT)

The synthesis of N,N-dimethylated lysine was inspired by previous report.[1] Boc-lysine-OH (246.3 mg, 1 mmol) and sodium cyanoborohydride ($NaCNBD_3$ or $NaCNBH_3$, 4.7 mmol) was dissolved in D_2O (4.7 mmol $NaCNBD_3$ in 426.8 μL D_2O, 4.7 mmol $NaCNBH_3$ in 440.0 μL D_2O). Formaldehyde-d2 (CD_2O, 1214.7 μL, 20 wt. %) or formaldehyde-^{13}C, d2 solution ($D^{13}CDO$, 1252.3 μL, 20 wt. %) was then dropwisely added on ice. The mixture was stirred at 37 °C for 2 h after cooling down. The target product was purified by silica gel flash column chromatography (MeOH/H_2O = 95/5) followed by lyophilization to a pale yellow solid. Boc-deprotections were carried out for 30 min at room temperature with TFA/TIS/H_2O (95/2.5/2.5) and washed with DCM/H_2O (vol/vol = 3/1). After removing organic layer, the N,N-dimethylated lysine was dried in a rotary evaporator and stored at -20 °C for further use.

Nα, Nε-diacetyl-lysine was synthesized from L-lysine-2HCl (L-lysine-2HCl $^{13}C_6$, L-lysine-2HCl $^{13}C_6$, $^{15}N_2$, L-lysine-2HCl 4,4,5,5-D_4 or L-lysine-2HCl 3,3,4,4,5,5,6,6-D_8 dissolved in H_2O, 1 mmol), acetic anhydride (acetic anhydride 1,1'-$^{13}C_2$, acetic anhydride, 1,1',2,2'-$^{13}C_4$ or light acetic anhydride, 9.6 mmol), and pyridine (14.1 mmol). After the solution stirred at 0 °C for 20 h, the target molecular was washed with ACN (10 mL, 3 times) and lyophilized under reduced pressure.

The synthetic procedure leading to the peptide bond of mdCAT included formation of N-triazinylammonium tetrafluoroborate by treating Nα, Nε-diacetyl-lysine (239.1 mg, 1 mmol) with appropriate DMTMM (328.1 mg, 1mmol, dissolved in 6.6 mL DMF) and NMM (328.1 μL) 2 h at 0 °C, followed by the addition of the N,N-dimethylated lysine (217.3 mg, 1.2 mmol) at room temperature for another 8 h. After the solvent evaporating in vacuum, the residue was purified by a C18 column to give mdCATs as transparent solid. The general synthetic procedures are shown in Table 1.

Purification and Detection of MdCAT reagents

The synthesized mdCATs were purified with C18-HPLC (Buffer A: water, 0.1% TFA; gradient: 0-20 mins 100% A; flow rate: 1 mL/min). After separating, they were injected into electrospray ionization (ESI)-based LTQ Orbitrap XLTM (Thermo Fisher Scientific, San Jose, CA) with a gas flow rate of Sheath gas 10 and Aux gas 5, then detected under positive ion mode. The duration of each injection was set as 0.80 min and the analyzer was calibrated every single day using Pierce™ Reserpine Standard for LC-MS (ThermoFisher Scientific). The instrument was set to complete a full mass scan from mass-to-charge ratio (m/z) range of 100-1000 with resolution of 60 000 (m/z at 400) in the Orbitrap without setting higher energy C-trap dissociation (HCD) for further fragmentation.

Sample Selection and Preparation

Serum samples (nine healthy individuals and twelve liver cancer patients) used in this study were generously provided by Department of Clinical Laboratory, Cancer Hospital of Guangxi Medical University. All samples were selected with no bias and quantified with codes (such as 1HC, 2HC and so on) to hide the specific information of patients. The overall study was reviewed and approved by the SHAPHC Ethic Committee (approved no. 2019(KY-E-18)). Human serum samples and BL21 (DE3) were resuspended in lysis buffer containing 8 M urea, 1× Halt Protease, and inhibitor cocktail for 20 min on ice and sonicated at 4 °C (five pulses for 10 s, 35% power). The supernatant of the lysates was collected after centrifugation (14000 rcf, 20 min at 4 °C). Then the protein samples were diluted to 2 mg/mL with 50 mM ammonium bicarbonate buffer. After reducing by 10 mM DTT at 56 °C for 1h, the free thiol were alkylated by 30 mM IAA in darkness for 30 min at room temperature. Samples were then digested by trypsin with enzyme-substrate ratio of 50:1 at 37 °C for 16 h. Solvent of these tryptic peptides were evaporated by lyophilizer after desalting and stored at -20 °C.

Sample Labeling

To the reaction vessel, 24 μg mdCAT and 6.6 μg DMTMM was dissolved in 20 μL DMF, followed by addition of 1 μL NMM. After stirring the mixture at 0 °C for 2 h, the in situ N-triazinylammonium tetrafluoroborate were formed, which were then transferred to the sample vial containing 1 μg digests for another 4 h at 37 °C.

Matrix-Assisted Laser Desorption Ionization Time-Of-Flight Mass Spectrometry (MALDI-TOF MS)

Analysis

The synthesized peptides before and after mdCATs labeling were examined by MALDI-TOF MS. CHCA matrix was dissolved in 50% ACN and 0.1% TFA at a concentration of 5 mg/mL. Samples and matrix (1 μL each) were spotted on a target plate for MS analysis. Myoglobin proteolytic peptides were used for mass calibration. All MALDI-TOF MS assays were carried out on a 5800 Proteomics Analyzer (AB SCIEX) in positive mode with a Nd: YAG laser at 355 nm, setting 400 Hz repetition rate and 20 kV acceleration voltage.

Liquid Chromatography Tandem Mass Spectrometry Analysis

Mass spectrometric acquisition of equally mixed E. coli sample set: Digested samples labeling mdCATs were mixed at equal ratio by weight and dried in vacuo. After reconstituting in buffer (98% H$_2$O, 2% ACN and 0.1% FA), each sample was injected onto a C18 reversed-phase analytical column (Acclaim PepMap C18, 100Å 75 μm × 25 cm) in mobile phase A (0.1% FA in water) and gradient-eluted with mobile phase B (0.1% FA in ACN). Eluted peptides were analyzed by liquid chromatography tandem mass spectrometry (LC-MS/MS) detection system, which is consisted of a nanoflow high-performance liquid chromatograph (HPLC) Easy nLC System (Thermo Fisher Scientific, San Jose, CA) coupled to an Orbitrap Fusion mass spectrometer (Thermo Fisher Scientific, San Jose, CA).

A total of 120-min gradient were employed to elute the equal ratio of 8-plex experiments (started from 2% to 5% buffer B within 5 min, then linearly increased to 25% buffer B within 110 min, 25% to 45% buffer B within 110 min, followed by raising buffer B to 90% within 4 min and holding for 2 min, returned back to 2% phase B within 1 min). Before DIA quantification, a comprehensive spectral library was constructed using DDA mode. For all DDA assays, fourier-transform ion cyclotron resonance (FTICR) full-scan was performed from m/z 350 to 1250 with automatic gain control (AGC) target of 1×10^6 and maximum injection time (IT) of 50 ms at a resolution of 15 K to identify peptides. Precursors were selected at top speed mode within cycle time of 3 s and subjected to dynamic exclusion of 20 s with a ± 0.01 m/z tolerance. The filtered precursors were triggered by high-energy collisional dissociation (HCD) MS/MS fragmentation using a 30% normalized collision energy (NCE), followed by scanning in Orbitrap with AGC target of 1×10^6 and an IT of 80 ms at 15000-resloving power to enlarge the scale of identified peptides/proteins. In contrast, the mdCATs DIA analysis had an additional quantitative resolving power (500 K at 200 m/z) performing after the survey scan with AGC target of 1×10^6 and maximum injection time (IT) of 100 ms. The assay used ten optimized discrete ranges in total: 350-576 m/z, 576-642 m/z, 642-693 m/z, 693-754 m/z, 754-805 m/z, 805-856 m/z, 856-907 m/z, 907-989 m/z, and 989-1250 m/z. For both DDA and DIA experiments the pre-filtration mode was enabled that only charge states from 2 to 5 could be eluted for MS/MS sampling. The data type was centroid.

Mass spectrometric acquisition of unequally mixed E. coli and human serum sample set: For the Easy nLC setup, 2 μg of each mixed sample was reconstituted in buffer (98% H_2O, 2% ACN and 0.1% FA) and separated using one column setup with an Acclaim PepMap C18 2 μm column of 75 μm 250 mm dimensions (Thermo Scientific) on an EASY-nLC™ 1200 system (Thermo Scientific) connected to an Orbitrap Exploris™ 480 Mass Spectrometer (Thermo Scientific). The gradient of capillary flow LC-MS was set as follows: the flow rate was kept 300 nL/min through a 120 min segmented gradient (2%-30% buffer B to 100 min, 30%-50% buffer B from 100 min to 114 min, sharply increased to 100% buffer B within 1 min and held for 5 min). The DDA method consisted of MS1 scan from 350 to 1600 m/z at 120 K resolution with AGC target of 300 and cycle time of 1.7 s. Then, precursors with charge states 2- 6 were included and fragmented at 30% HCD. And the quadrupole isolation width was set to 1.6 m/z for DDA. Correspondingly, the DIA segments were setup with MS1 scan from 350 to 1600 m/z at 120 K resolution and triggered at 33 % HCD, followed by MS2 at 480 K resolution with AGC target of 200 and custom maximum injection time. As for the quantitative proteomes of multiple human liver serum samples, the discrete ranges were adjusted as follows: 350-526 m/z, 526-594 m/z, 594-646 m/z, 646-693 m/z, 693-746 m/z, 746-796 m/z, 796-848 m/z, 848-912 m/z, 912-998 m/z, and 998-1600 m/z. Either Orbitrap (FT) detectors of Orbitrap Exploris™ 480 Mass Spectrometer or Orbitrap Fusion mass spectrometer were calibrated by Pierce™ FlexMix™ Calibration Solution (ThermoFisher Scientific (San Jose, CA). The electrospray voltage of 2.3 kV versus the inlet of the mass spectrometer was used. All DDA and DIA assays were performed alternatively to minimize errors.

Data Analysis

The acquired DDA MS raw files were processed using Proteome Discovery (PD, version 1.4.1.12, Thermo Electron Corp.) with the Mascot (version 2.3.0) nodes integrated, searching against a target-decoy database (Swissprot human database (released in January 2017; Homo sapiens, 20,129 entries) or the Swissprot E. coli database (released in June 2019; 3,607 entries, http://www.uniprot.org/). Searching parameters were set as follows: the lowest isotopic mdCAT tag (A2 (+382.2884 Da), which incorporated seven ^{13}C, two ^2H, and two ^{15}N atoms) on peptide N-termini and lysine (K) residues, a 50 ppm precursor mass tolerance, a fragment mass tolerance of 0.5 Da, a maximum of two missing cleavages with trypsin enzyme, a validation with q-values to a false discovery rate (FDR) of 1% or less, and validation based on q-value. The comprehensive DDA spectral library was completely constructed by exporting files (.fasta) from PD. Then, Skyline (version 4.1, Seattle, WA) was used to extract targeted mass spectra from the each DIA.raw data, precursors with unknown or single charge were excluded for further search. Quantifications of b/y fragment

ions, Skyline script arguments included the following: a MS/MS filtration of predicted RT ± 3min, a MS1 resolution of 120 K (60 K for equally mixed E. coli peptides), a MS2 resolution of 480 K (500 K for equally mixed E. coli peptides), the heaviest isotopic mdCAT (B2 (+382.3302 Da)) gauged as base, and the appropriate heavy isotopic mdCATs (the specific label schemed in Table 1, A1 (+382.3127 Da), A2 (+382.2884 Da), B1 (+382.2942 Da), C1 (+382.3010 Da), C2 (+382.3069 Da), D1 (+382.3185 Da), D2 (+382.3244 Da)). For all samples, oxidation of methionine residues (+15.9950 Da) and carbamidomethylation of cysteine residues (+57.0215 Da) were searched as variable and fixed modifications, respectively.

Quantification

After extracting fragments from the Skyline pre-established spectral library, the exported ion ratios were assigned to quantify corresponding peptides and the resolved pairs with ratio = 1 were required to drop to be eligible for peptides/protein quantification. Then, we employed an in-house programmed script to impute the missing value (< 50%) with K-Nearest Neighbors (KNN) on these peptides.[2,3] Two peptides belonging to one protein were averaged to give the protein quantification ratio. Otherwise, quantitative protein measurements were acquired from the median ratios of all relative peptides. To assess the batch effects in our proteomic profiling quantifications, we implement Python V 3.7.3 to figure the hierarchical clustering and principal component analyses in terms of these two variables: batch identity and sample type (healthy individuals and liver cancer patients).

For gauging protein ratio boundaries of mdCAT DIA strategy, we equally mixed the pooled serum sample and processed the whole workflow in triplicate. Kolmogorov–Smirnov test was applied to conforming the normal distribution of protein data, of which outliers had been removed by box-plot statistical method. A confidence interval of 99% was established in the statistical subsequently model to obtain the up- and down-regulated boundaries.

Supporting Figures

Fig. S1 ¹H NMR of (Ac)₂-lysine $^{13}C_6$ $^{15}N_2$.**¹H NMR** (500 MHz, D2O) δ 4.34 (d, J = 142.3 Hz, 1H), 3.19 (d, J = 138.4 Hz, 2H), 2.07 (s, 3H), 2.00 (s, 3H), 1.23−1.95 (m, 6H).
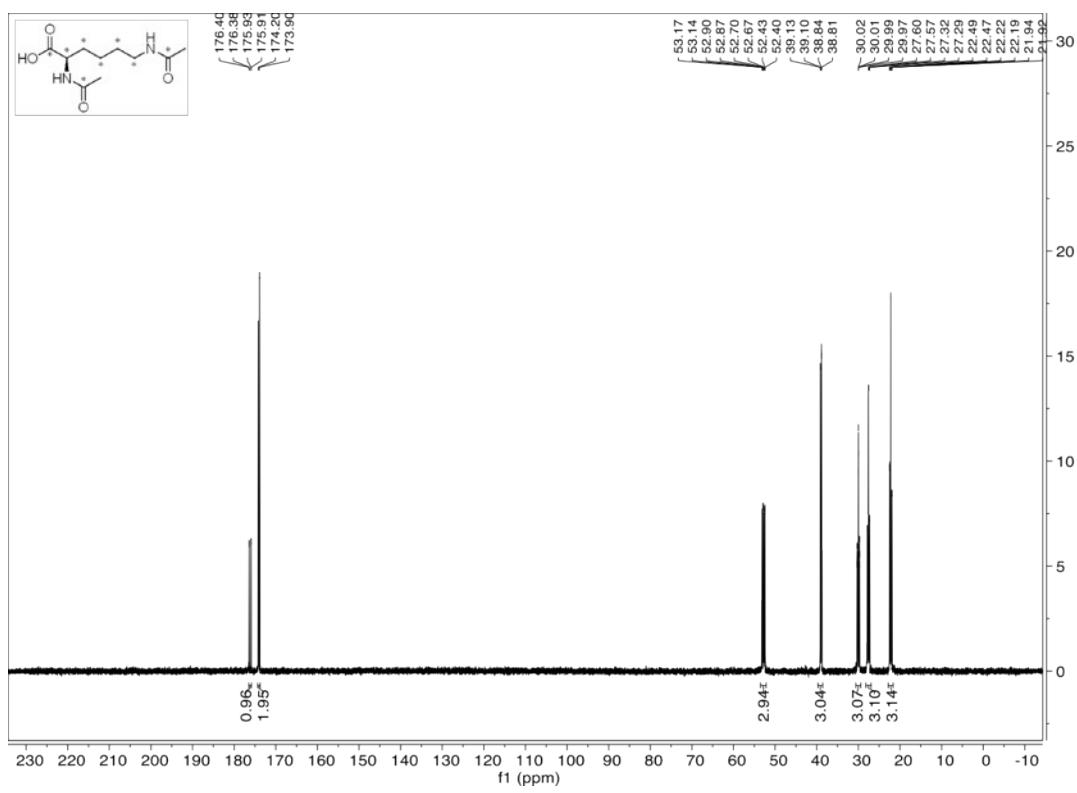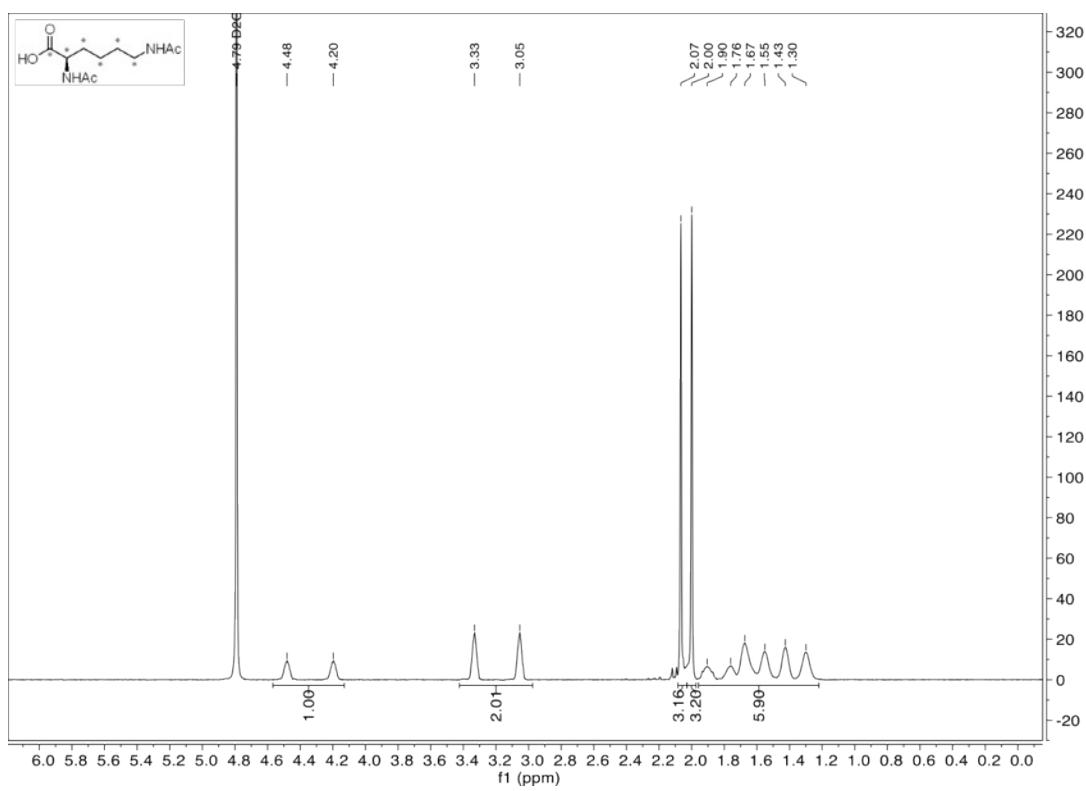
Fig. S2 ^{13}C NMR of (Ac)$_2$-lysine ^{13}C$_6$ ^{13}C$_2$. **^{13}C NMR** (126 MHz, D$_2$O) δ 176.2 (dd, J = 58.6, 2.8 Hz), 174.2, 173.9, 52.8 (ddd, J = 58.4, 34.0, 3.8 Hz), 39.0 (dd, J = 36.0, 4.4 Hz), 30.0 (tdd, J = 34.4, 4.6, 2.0 Hz), 27.6 (td, J = 35.4, 4.0 Hz), 22.2 (td, J = 34.8, 2.9 Hz).
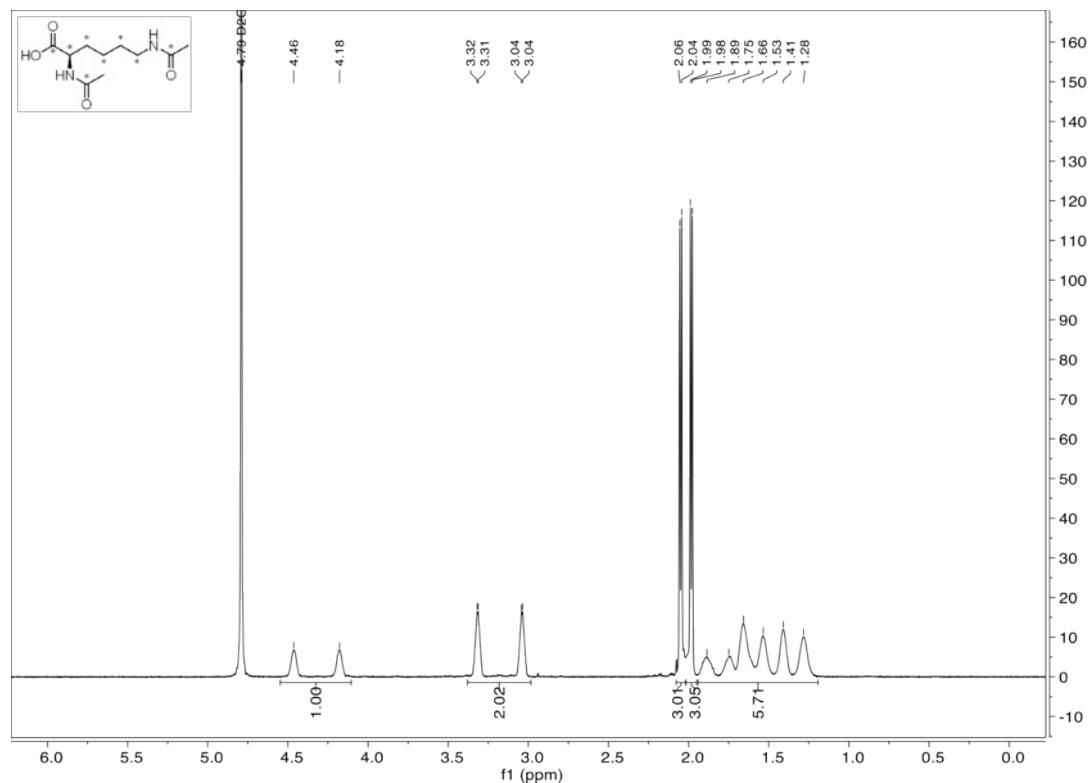
Fig. S3 ^{1}H NMR of (Ac)$_2$-lysine ^{13}C$_6$ ^{13}C$_2$. **^{1}H NMR** (500 MHz, D$_2$O) δ 4.32 (d, J = 142.3 Hz, 1H), 3.18 (dd, J = 138.2, 3.4 Hz, 2H), 2.05 (d, J = 6.1 Hz, 3H), 1.98 (d, J = 6.0 Hz, 3H), 1.21–1.94 (m, 6H).

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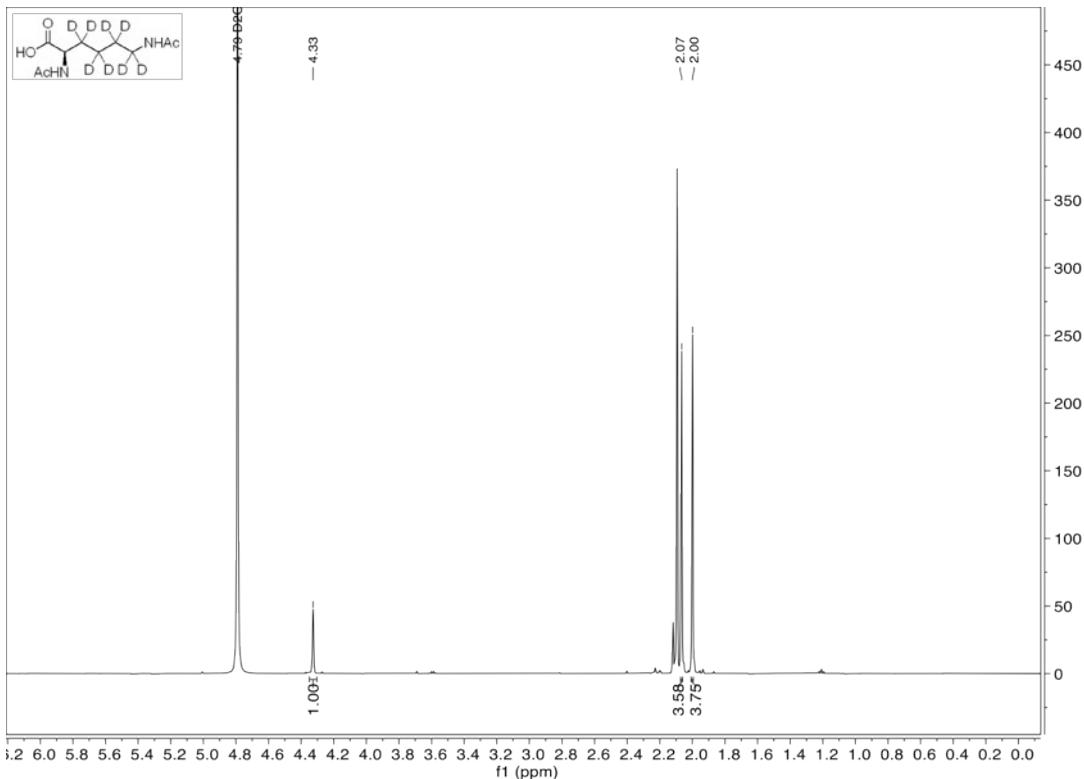
Fig. S4 ^{1}H NMR of $(Ac)_2$-lysine D_8. ^{1}H NMR (500 MHz, D_2O) δ 4.33 (s, 1H), 2.07 (s, 3H), 2.00 (s, 3H).
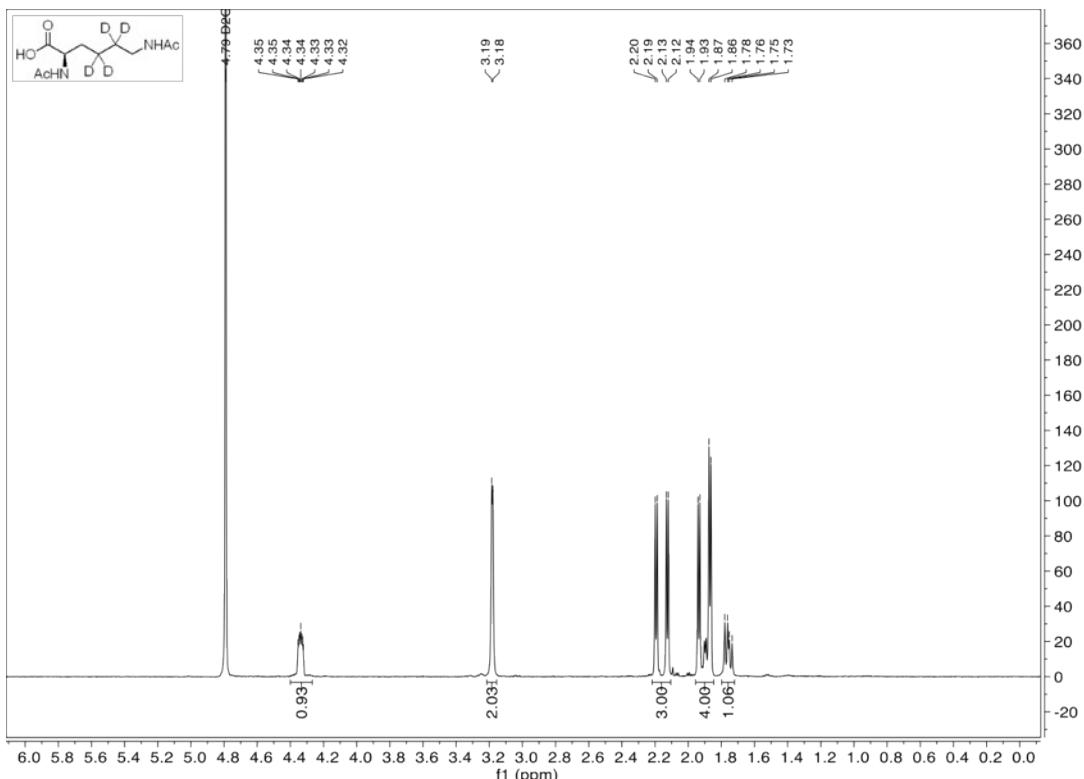
Fig. S5 ^{1}H NMR of $(Ac)_2$-lysine D_4 $^{13}C_4$. **^{1}H NMR** (500 MHz, D_2O) δ 4.34 (ddd, J = 8.4, 5.1, 2.6 Hz, 1H), 3.18 (d, J = 3.6 Hz, 2H), 2.16 (dd, J = 33.7, 6.1 Hz, 3H), 1.85–1.95 (m, 4H), 1.72–1.79 (m, 1H).
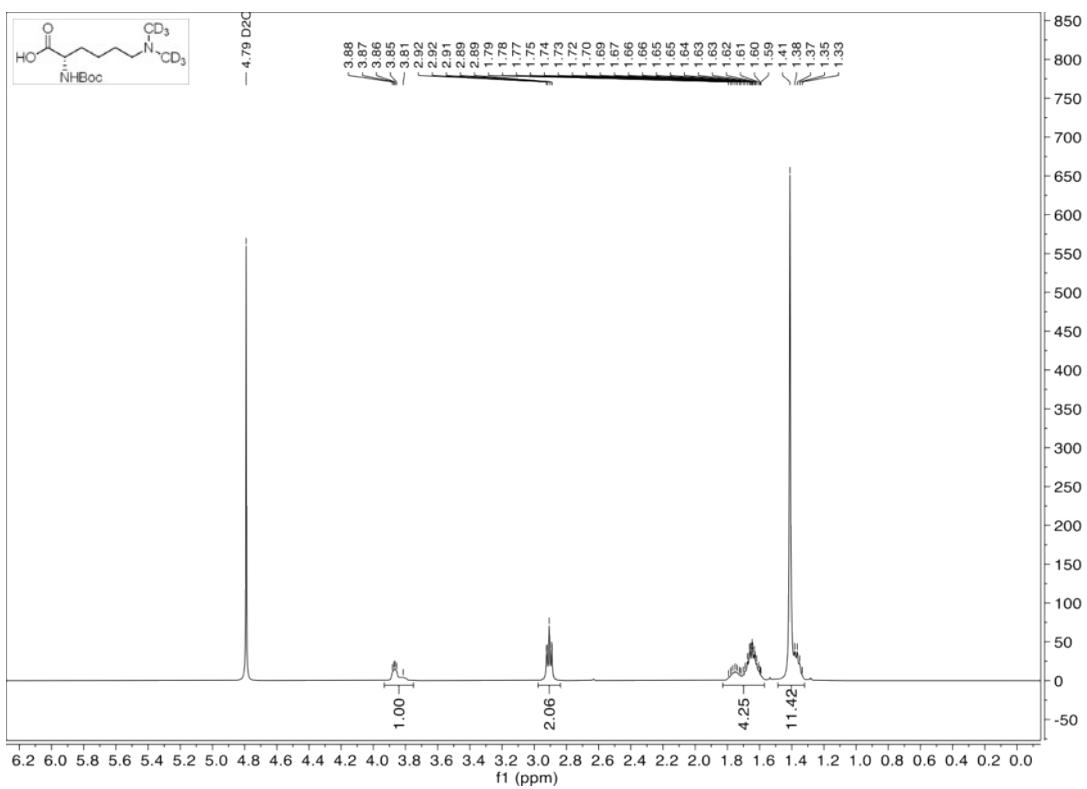
Fig. S6 ¹H NMR of Boc-(Me)₂-lysine 2*CD₃. **¹H NMR** (500 MHz, D2O) δ 3.76–3.93 (m, 1H), 2.86–2.96 (m, 2H), 1.57–1.81 (m, 4H), 1.41 (m, 11H).
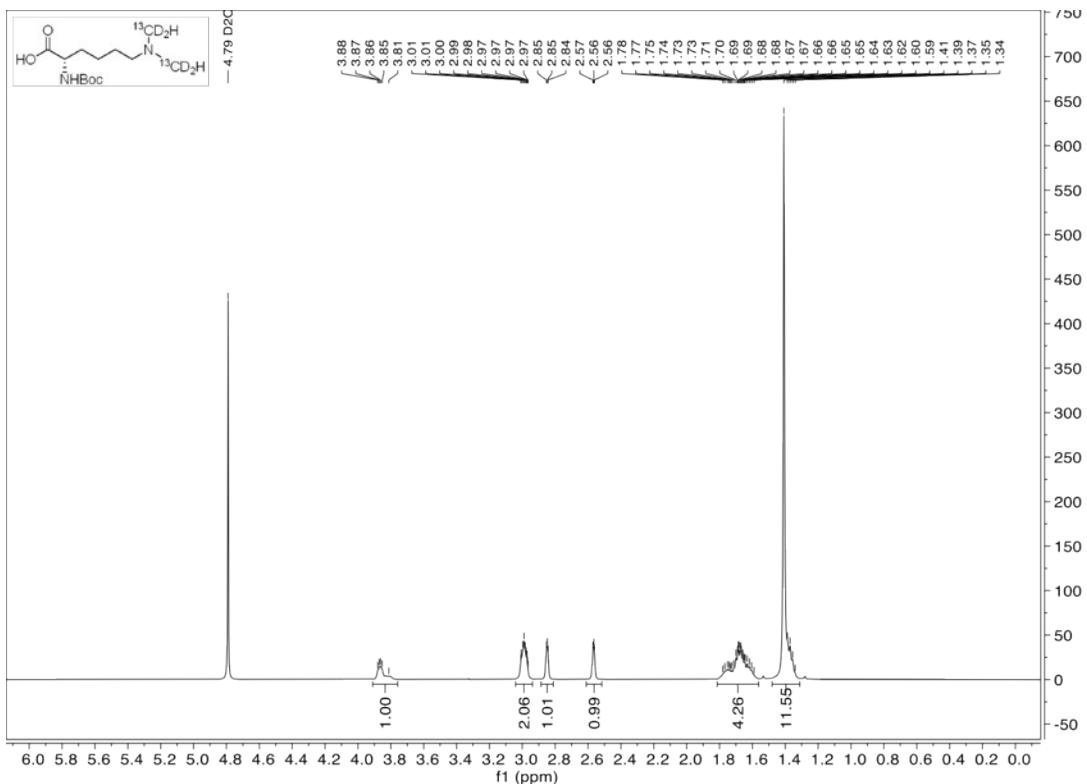
Fig. S7 ¹H NMR of Boc-(Me)₂-lysine-(¹³CHD₂)₂. **¹H NMR** (500 MHz, D2O) δ 3.77–3.92 (m, 1H), 2.96–3.02 (m, 2H), 2.83–2.87 (m, 1H), 2.55–2.58 (m, 1H), 1.59–1.79 (m, 4H), 1.41 (m, 11H).

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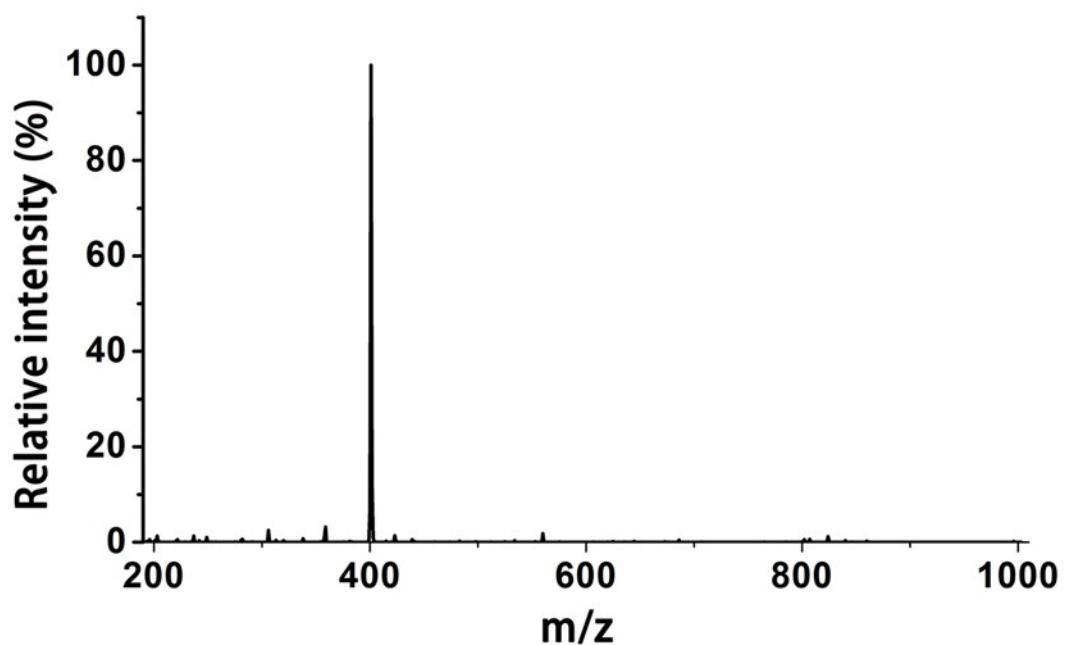
Fig. S8 ESI mass spectrum of purified mdCAT.
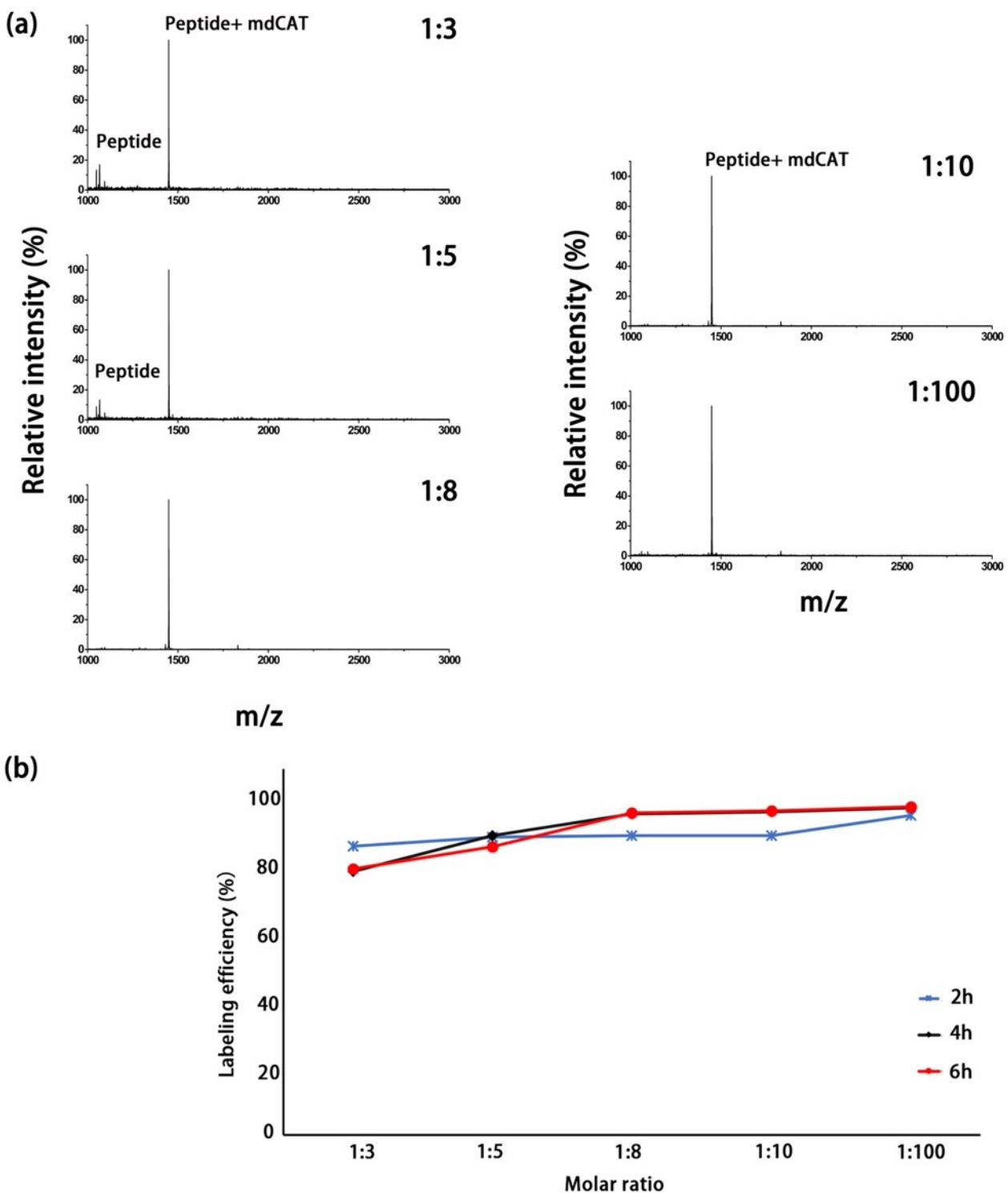
Fig. S9 (a) MALDI mass spectra of the reaction between ESTLHLVLR and derivatized lysine with different molar ratios for 4 h. (b) The labeling efficiency of derivatized lysine with different molar ratios of ESTLHLVLR.
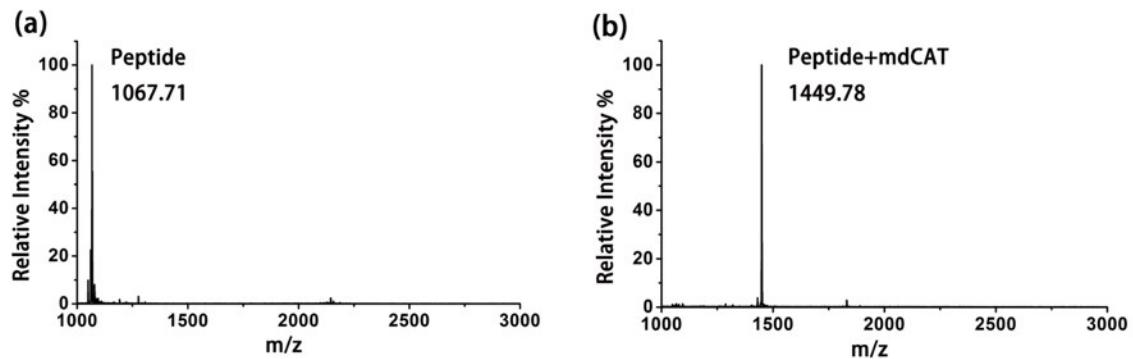
Fig. S10 MALDI-TOF mass spectra of synthesized peptide ESTLHLVLR (a) before and (b) after mdCAT labeling.
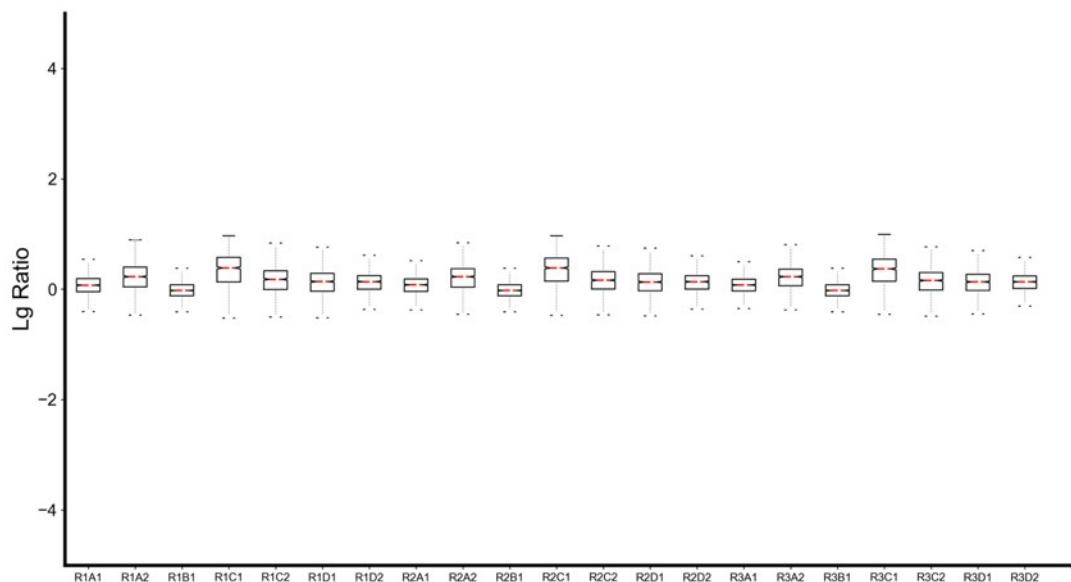
Fig. S11 Box-plot statistical method applied in removing the outliers of the protein ratios of   pooled human serum samples mixed at equal ratio across all three technical replicates.
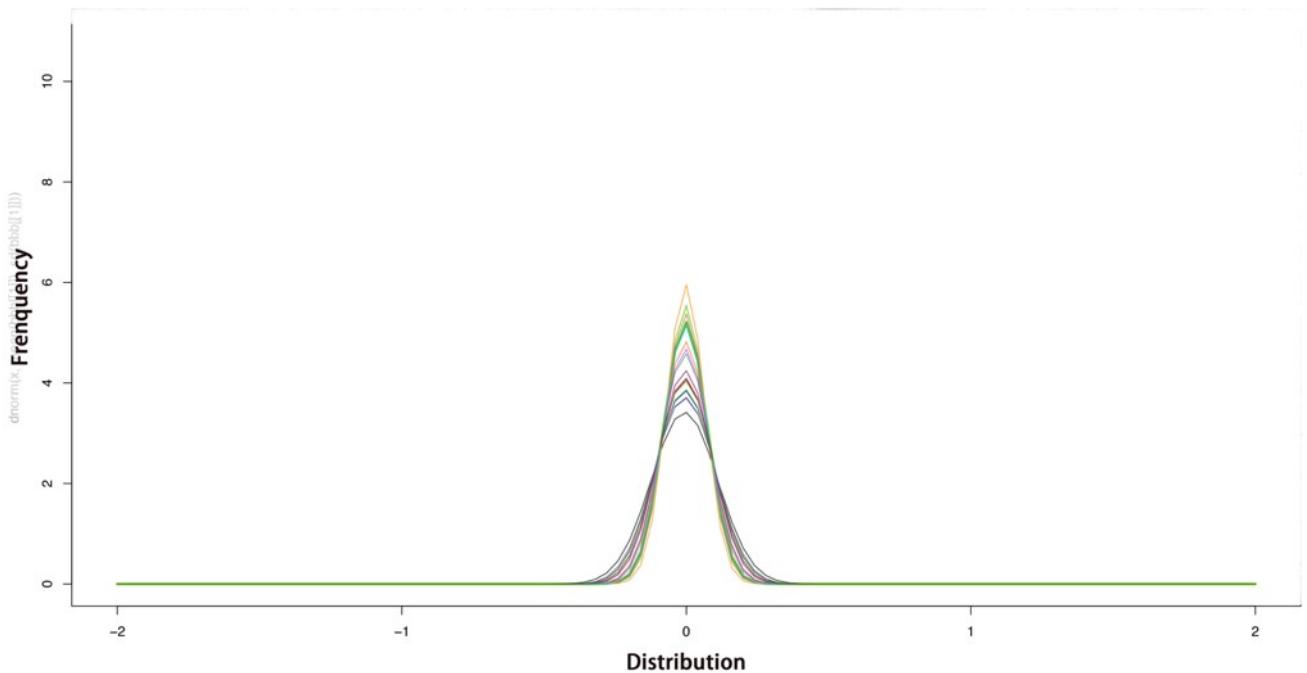
Fig. S12 Up- and down-regulated boundaries obtained from statistical model with a confidence interval of 99%. Quantitative data were generated by pooled human serum samples mixed at equal ratio across all three technical replicates after removing the outliers of the protein ratios by the box-plot statistical method.
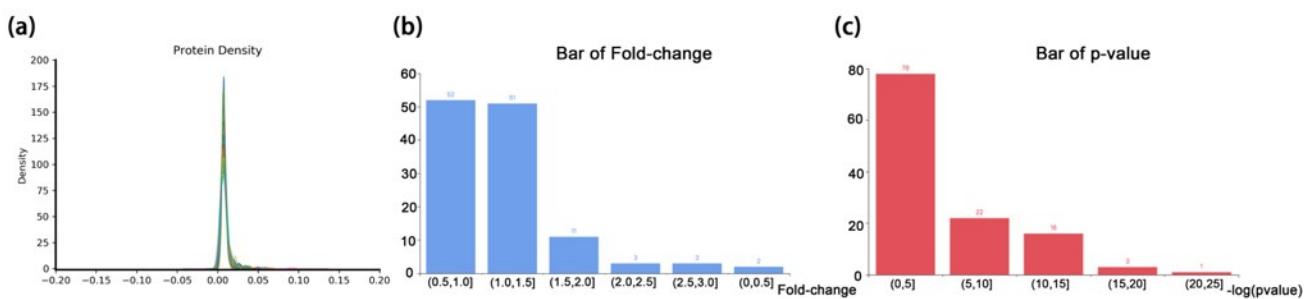
Fig. S13 Homogeneity of the quantified serum samples. (a). Curves (n=21) show the density of normalized protein ratios. (b) (c). Histograms demonstrate the distribution of fold change and p-value (across –log 2) quantitative ratios. Quantitative data were generated by 21 human serum samples mixed at equal ratio across all three technical replicates.
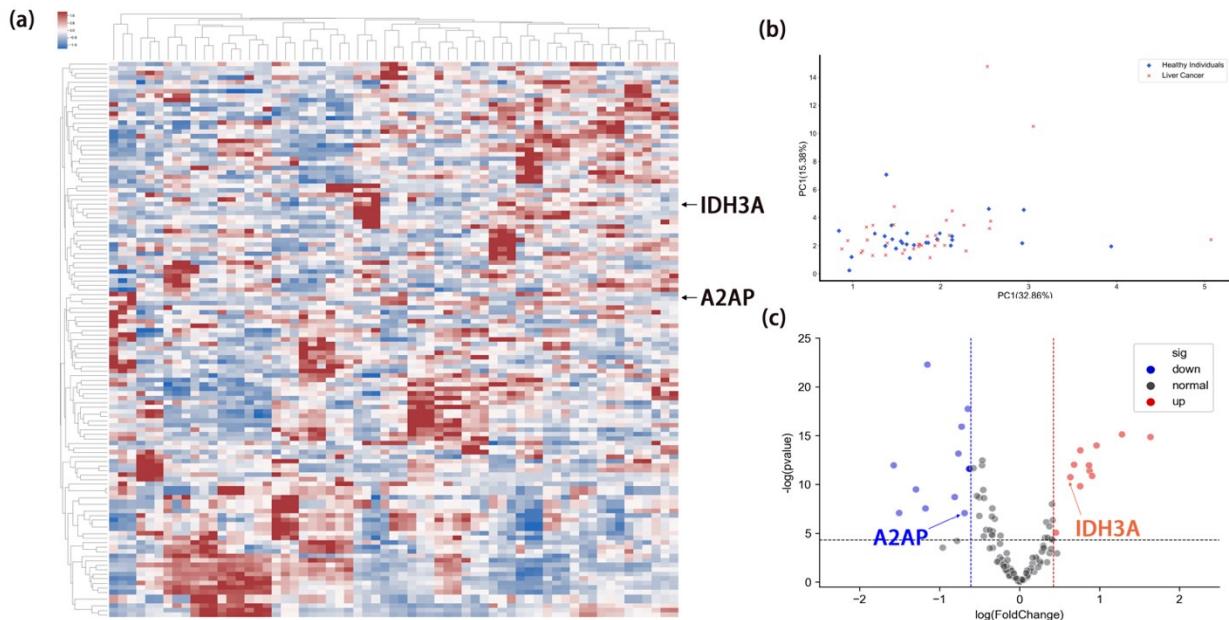
Fig. S14 (a) Clustering analysis of proteomic profiling quantifies 21 human serum samples mixed at equal ratio: 9 healthy individ-uals and 12 liver cancer patients. All these serum samples were pooled and calculated as the base of quantified ratio. The heat map depicts the relative abundance of signature proteins. (b) Principal component analysis of proteomic profile according to sample types (blue, healthy individuals = 9; red, liver cancer patients = 12; n = 3). Quantitative data were generated by 21 human serum samples mixed at equal ratio across triplicates. (c) Volcano plot distribution of quantified   equally mixed serum proteins   (cancer serum compared against healthy serum; FDR = 0.05; n = 3). Proteins with striking difference are highlighted in red and blue (red, up-regulated proteins; blue, down-regulated proteins; arrows, proteins approved by FDA).
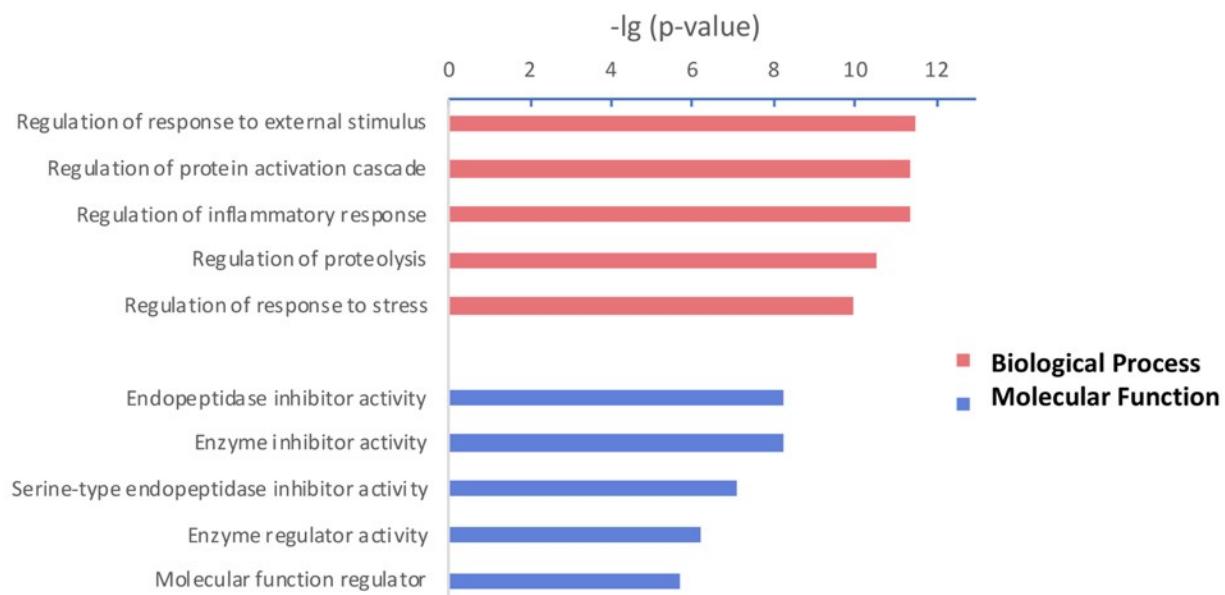
Fig. S15 GO analysis of the mdCATs quantified differential expression proteins in terms of biological process (red), molecular function (blue).

Supporting Tables

Table S1 The mdCATs DIA quantification results of equally mixed *E.coli*.

Pro_Sequence	R1A1/R1 D1	R1D2/R1 B2	R1C1/R1 C2	R1A2/R1 B1	R2A1/R2 D1	R2D2/R2 B2	R2C1/R2 C2	R2A2/R2 B1	R3A1/R3 D1	R3D2/R3 B2	R3C1/R3 C2	R3A2/R3 B1
sp|P61517|CAN_ECOLI-DLDVTATNR	0.602757	1.6779	0.449308	0.346121	0.751655	1.6779	0.178971	0.433281	0.809753	1.471	0.199015	0.574026
sp|A7ZSL0|RS10_ECO24-TVDALMR	0.816311	0.866251	0.972618	3.968798	0.816311	1.2445	0.84958	6.098094	0.816311	1.2445	0.736883	10.88323
sp|A7ZV73|RS18_ECO24-YLSLLPYTDR	2.009617	1.72175	0.734812	0.276771	1.328801	1.57245	0.72995	0.252309	1.01653	1.57245	0.913182	0.155672
sp|A7ZJA8|SUCC_ECO24-DQSQEDPR	0.723224	5.316468	1.911921	0.548941	1.540292	8.798	0.72094	0.783806	15.14943	6.8342	1.761875	0.586684
sp|P27298|OPDA_ECOLI-ETGQSFLDNILSR	1.126187	0.2903	0.648728	0.835888	0.821757	0.3787	1.25087	1.751874	0.821757	0.3787	1.25087	1.704671
sp|P37902|GLTI_ECOLI-ESSVPFSYYDNQQK	1.203248	1.24255	0.328474	1.851984	1.009774	1.24255	0.332982	0.604645	0.842236	1.1762	1.196733	1.178111
sp|P0ACE8|HINT_ECO57-IAEQEGIAEDGYR	1.063408	0.8218	0.995383	1.056544	0.741156	1.23855	1.132239	0.61536	0.918473	1.0861	1.160941	0.894099
sp|A8A6H0|TNAA_ECOHS-KYDIPVVMDSAR	1.051659	0.4745	1.030527	1.645149	0.668187	0.5386	0.715616	1.247182	1.336283	0.5386	0.893903	2.341378
sp|B1IUY2|SYA_ECOLC-VDEAGFEAAMEEQR	5.658725	1.1765	0.801069	0.710997	5.153502	1.1765	1.150311	0.764101	3.254871	1.1765	1.150311	0.348127
sp|P00968|CARB_ECOLI-GLEVGATGFDPK	0.373867	0.89005	1.027649	0.537858	1.222476	1.11	0.440535	0.497646	1.440344	1.11	0.48884	0.524481
sp|P23843|OPPA_ECOLI-IEGVPESNISR	3.277485	0.92065	2.23434	0.912778	2.25023	0.98115	3.040223	0.754125	1.224153	0.7818	3.012211	0.75604
sp|P0A6Z5|HTPG_ECO57-ALTPFIDR	4.017543	0.1426	6.319167	2.188818	2.352383	1.659	4.942408	2.847001	2.352383	3.1754	4.942408	2.066078
sp|P0AC39|ASPA_ECOL6-EVPADAYYGVHTLR	2.287717	0.7853	0.918682	4.42802	1.07988	1.0004	1.169929	2.897045	2.279601	0.90135	0.668464	1.633932

sp|P0AC39|ASPA_ECOL6-EYSPLAVK	2.530987	0.875	0.866103	0.607757	2.476624	0.875	0.856804	0.620041	1.816819	1.0961	0.867844	0.890649
sp|P06999|PFKB_ECOLI-FVMPGAALNEDEFR	25.73592	0.8919	0.78728	0.937402	16.70139	1.658	0.353667	1.105494	16.70139	1.658	0.439632	2.072348
sp|P69778|LPP_ECO57-LDNMATK	2.343006	0.6109	8.854937	1.936954	3.047196	0.8261	4.904566	1.108849	3.042356	0.8261	4.904566	1.009052
sp|P0A6Y9|DNAK_ECOL6-FQDEEVQR	0.121775	1.89645	0.986109	3.271861	0.239673	1.1059	1.295214	1.7737	0.576238	0.93955	0.82227	1.451345
sp|P63285|CLPB_ECO57-IVAVQ	1.747421	0.3801	7.085307	1.117244	1.747421	0.7239	2.240229	0.852339	2.521486	1.0665	1.912838	1.285477
sp|P0A863|TPX_ECOL6-AQTFTLVAK	0.590042	0.83075	0.885496	0.797592	0.785825	1.06	0.601531	0.797592	0.535684	1.0869	0.582638	0.520008
sp|P64583|YQJD_ECO57-LGETGDAIAK	0.91827	0.4595	0.291884	0.987943	2.10324	0.70255	0.387778	0.505741	1.910388	1.33705	0.632439	0.498767
sp|P08839|PT1_ECOLI-ISADQVDQEVER	0.753906	1.983011	0.877798	2.195195	1.31359	2.498635	1.520569	2.284641	1.272848	2.5819	0.651445	2.038644
sp|B7N6A6|NDK_ECOLU-DLLGATNPANALAGTLR	0.458584	1.0137	0.798291	2.970453	1.041209	1.13165	0.809822	2.553321	0.9788	1.0137	0.963974	0.649419
sp|A7ZTU4|ATPB_ECO24-TVNMMELIR	0.25192	1.048208	2.014229	0.196514	0.25192	0.859994	2.644136	0.152219	0.25192	1.014221	1.971785	0.152219
sp|P0AC39|ASPA_ECOL6-TQLQDAVPMTLGQEFR	0.719291	2.5733	0.938329	2.990594	0.656361	1.9754	1.064796	2.680714	0.590587	1.9651	0.907993	2.366612
sp|P00509|AAT_ECOLI-GLEEDAEGLR	0.222249	1.310854	0.976645	0.519102	0.244134	0.746041	1.190394	0.635814	0.240599	0.4555	1.068628	1.071534
sp|A1A7K0|GSA_ECOK1-ELIPGGVNSPVR	0.564969	1.2732	0.883765	1.219705	1.200381	1.099	0.650987	0.938654	1.217912	1.1858	0.765931	0.89219
sp|B5Z0E9|EFTS_ECO5E-FEVGEGIEK	0.155776	0.884565	1.225778	1.581923	0.627992	0.5712	0.719482	0.794192	0.575211	1.40085	0.744179	0.577918
sp|B7LFH2|RPIA_ECO55-GADVALIGTPDGVK	0.23327	1.35915	1.101606	0.462582	0.23327	1.35915	0.845198	0.687645	0.867575	1.0129	0.690265	0.718095
sp|A1AGI5|RL17_ECOK1-NMAGSLVR	2.272188	1.091116	0.485245	0.498965	2.272188	0.954253	0.52146	0.647666	2.272188	1.565428	1.055387	0.647666
sp|B7M6B0|TOLB_ECO8A-ITWEGSQNQDADVSSDGK	0.215373	0.450333	0.207892	1.262293	1.806553	1.2058	0.421758	1.030156	1.672169	1.5065	0.42113	0.991851
sp|B7NF50|ATPA_ECOLU-VGGAAQTK	3.613011	0.736778	0.136073	1.211977	4.644688	0.8306	3.051769	0.560312	5.685574	0.8306	0.883293	0.880495
sp|A7ZV73|RS18_ECO24-DIATLK	0.38655	3.3566	1.498879	0.179332	0.254337	0.841	1.498879	0.745549	0.150561	0.72845	2.017322	0.732844

sp|A7ZV73|RS18_ECO24-NYITESGK	1.237259	0.64305	1.620609	1.020897	0.943193	0.8042	1.56949	0.924344	0.85317	0.8042	1.200344	0.889921
sp|P63285|CLPB_ECO57-QYSELEEEWK	2.091546	1.7231	0.516526	1.947749	6.637093	1.0087	2.119997	1.218416	1.733952	1.3659	1.257998	4.323409
sp|B5Z2K8|RL9_ECO5E-RAELEAK	0.650741	0.62995	0.333333	5.385774	1.706705	0.9815	0.978361	1.359257	1.285479	0.9815	0.888687	1.139993
sp|P0A6G1|CH10_ECO57-ILENGEVKPLDVK	15.99821	0.2861	1.047508	1.278661	9.280315	0.2861	0.896184	1.099386	2.505365	0.36185	1.159348	0.94971
sp|P17169|GLMS_ECOLI-HPDTLLAAR	0.076765	2.450261	1.026319	0.557839	0.076765	2.714407	1.576334	0.555662	0.076765	2.628473	1.914474	0.896995
sp|P0A6G1|CH10_ECO57-EVETK	0.361675	0.3606	1.391335	0.298256	0.336486	0.2314	0.830763	6.613671	0.724976	0.3555	1.019627	0.417036
sp|P0AG32|RHO_ECO57-VLDLASPIGR	0.571051	1.065019	0.842403	0.521248	0.16437	0.9188	0.372246	0.521248	0.593233	0.70075	2.165772	0.996919
sp|P0AFF8|NUSA_ECO57-VQAVSTELGGER	1.771323	1.0941	0.577863	0.675444	1.778402	1.0941	0.524905	0.649234	1.213194	1.69315	0.431703	0.734603
sp|P0AFG5|ODO1_ECO57-ISTVPEAVEMQSR	1.14687	1.8886	1.667867	0.447	0.499942	2.7002	2.335496	0.47942	0.401592	3.0851	1.217529	0.541661
sp|A7ZV12|CH60_ECO24-FENMGAQMVK	1.841082	3.713	0.497005	0.759933	1.229874	1.1553	0.519894	1.288977	1.458292	1.1553	0.402558	1.005251
sp|P23843|OPPA_ECOLI-VTDEAQR	2.127174	0.2577	0.428214	1.324403	2.127174	0.2577	0.246206	0.971047	2.127174	0.2577	0.320554	0.971047
sp|P0ABH7|CISY_ECOLI-LMGFGHR	1.492604	1.313084	1.249283	0.13306	1.45237	1.182435	1.594866	0.144717	1.45237	1.110536	1.196337	0.129794
sp|P08839|PT1_ECOLI-EENPFLGWR	4.64371	1.5627	0.381445	0.702743	0.636139	1.05115	0.651466	0.440267	1.156693	1.5627	0.651466	0.263256
sp|P39325|YTFQ_ECOLI-QENQIK	0.154867	1.951942	1.211614	0.395123	0.376833	1.3055	1.211614	0.098574	0.752076	1.1983	1.204585	0.209496
sp|B7MLA1|PYRG_ECO45-DVDSIYK	1.569146	0.3061	0.562486	0.883068	1.856596	1.52295	0.591736	0.768225	2.171903	1.82145	0.455042	0.504444
sp|P0ACF1|DBHA_ECOL6-IAAANVPAFVSGK	0.932812	0.7984	0.543237	0.529961	1.076267	0.8052	0.784834	0.449767	0.941133	0.8052	0.778116	0.407211
sp|P08200|IDH_ECOLI-EEMGVK	0.352857	1.045157	8.269457	0.475987	0.57491	0.930098	4.779863	1.989025	0.266469	1.0102	2.41413	1.989025
sp|A7ZV12|CH60_ECO24-AIAQVGTISANSDETVGK	1.289141	0.5583	0.415783	0.687165	1.241079	0.81355	0.675655	0.651071	1.207149	0.8448	0.675655	0.601428
sp|B7MIU7|RS16_ECO45-IAHWVGQGATISDR	1.105578	1.297124	4.768467	0.198546	1.773914	1.78455	1.368443	0.487133	1.150768	1.78455	1.368443	0.715473

sp|A7ZTU4|ATPB_ECO24-IMNVLGEPVDMK	0.751144	0.8093	1.062708	0.67954	0.777121	0.76735	1.120572	0.682591	0.747853	0.8032	1.041916	0.749028
sp|P36683|ACNB_ECOLI-LWVAPPTR	0.91037	1.4369	1.056206	0.653587	0.653241	1.3084	0.592062	0.619421	2.443652	1.1799	0.550691	0.649694
sp|P0A9C6|GLN1B_ECOL6-GGYFPVPPVDSAQDIR	1.638711	0.95415	1.102551	0.607454	1.256917	0.5185	1.524658	1.346619	1.256917	0.6938	1.167294	1.506323
sp|B7LA23|GLPK_ECO55-ADISSDQIAAIGITNQR	1.20556	1.05525	1.059199	0.603472	0.787028	1.02065	0.930042	0.575658	0.830554	0.9122	0.940104	0.62292
sp|A7ZSD0|MDH_ECO24-AGGGSATLSMGQAAAR	0.944071	0.49855	0.912577	0.5532	0.46057	0.446	1.095852	0.668464	0.778259	0.446	0.995384	0.516211
sp|A1AGK0|RS17_ECOK1-SIVVAIER	1.888211	1.050115	1.4461	3.11555	2.358709	0.849476	1.182717	1.279281	0.500168	1.308828	1.481047	1.167955
sp|B1LPI9|G6PI_ECOSM-DVTIADLFAK	1.32179	0.7381	0.702197	0.686788	1.412608	0.7381	0.898095	0.669994	1.374406	0.6522	0.481637	0.594532
sp|P0AC70|GLRX4_ECOL6-FAYVDILQNPDIR	0.950203	1.2464	1.333731	0.623712	0.781807	1.2464	1.257839	0.623712	0.764436	1.147	1.05623	0.466186
sp|P0AC34|FUMA_ECOL6-EILAQLSQYPVSTR	1.307263	0.56915	0.874862	3.132106	0.677903	0.7484	1.160208	2.319693	1.02365	0.6848	1.265928	2.430565
sp|B7UJP9|YAJQ_ECO27-GGDLGQPFQFK	1.738275	0.3622	0.809123	0.175805	0.871717	0.3622	0.809123	0.671043	1.026159	0.3622	0.81502	0.684666
sp|Q1R626|RL18_ECOUT-SGFQYHGR	1.053074	4.219137	0.372965	0.586202	1.193168	4.402535	0.239641	0.586202	1.079136	4.9448	0.33492	0.586202
sp|A7ZTP0|IBPB_ECO24-IAISERPALNS	4.314497	1.6493	0.827273	4.288419	6.216653	1.3046	1.014384	6.653376	3.896434	1.3046	0.969037	0.789982
sp|P09394|GLPQ_ECOLI-NIGIYPEIK	0.418733	1.50715	0.876502	0.392459	0.511129	1.0356	0.961162	0.712621	0.500553	1.207	1.168107	1.103008
sp|A1A7M9|ACCA_ECOK1-GQSEAIAR	2.409553	0.4453	0.635909	1.135192	0.387055	0.4453	0.381699	1.475631	0.777684	0.4453	0.381699	1.475631
sp|P0A6Z5|HTPG_ECO57-SEITDEEYK	2.228815	2.2531	1.238349	0.846399	2.168357	2.1465	2.155895	0.414784	1.484632	2.1465	1.704878	0.553799
sp|P0ACK0|CRP_ECO57-QPDAMTHPDGMQIK	0.555043	0.6081	0.213214	0.457355	0.161931	0.6081	1.044734	0.457355	0.555043	1.66305	0.32265	0.418755
sp|A8A4Y4|IF2_ECOHS-LAAEEQAQR	1.149497	0.4073	2.736875	2.42099	0.959328	0.5338	1.304932	1.607566	0.959328	0.5483	1.304932	1.607566
sp|P0AG68|RS1_ECOL6-DVVLVDAGLK	0.892333	0.20055	3.883583	1.712863	0.722589	0.20055	6.800627	0.402813	0.722589	0.2169	5.934002	0.427131
sp|P0AG32|RHO_ECO57-GTGNMELHLSR	0.382454	0.888829	0.557143	0.88573	0.657978	0.836495	0.557143	0.834569	0.657978	0.602162	0.557143	0.84244

sp|B5Z2K8|RL9_ECO5E-NIEFFEAR	1.336016	1.870927	1.317626	0.641011	0.843732	2.49195	1.474094	0.460228	1.270425	1.9385	0.778894	0.460228
sp|P0A6Z5|HTPG_ECO57-ELISNASDAADK	5.419843	2.5506	1.440776	0.759656	4.380128	2.7367	1.550278	0.922371	2.932183	1.9825	0.85958	1.166038
sp|P0AGF0|SUCD_ECOL6-DSILEAIDAGIK	0.928623	0.8232	0.088136	0.237334	0.745108	1.64385	0.648922	0.32655	1.043481	1.4766	0.606471	0.331745
sp|P0A8N6|SYK2_ECO57-TLAQEVLGTTK	0.929236	1.01405	2.90282	2.455426	2.122313	1.01405	4.24354	2.493624	0.844852	0.9867	0.775604	1.784618
sp|P33602|NUOG_ECOLI-ELVGEENFYTGIAHGEQER	4.279355	1.8334	1.024436	0.26238	2.46191	1.8334	1.671504	0.26238	1.650059	1.3349	1.539801	0.310287
sp|P0ADZ7|YAJC_ECOLI-DFVAAVLPK	1.789497	1.9546	2.261002	0.173228	1.657598	1.9546	2.099496	0.761671	1.657598	1.9546	2.043956	0.761671
sp|P0A969|CSPD_ECOL6-GNHASVIVPVEVEAAVA	1.04399	2.505396	0.23528	0.870421	0.498481	2.5019	0.458464	0.239165	0.576691	2.5019	0.93074	0.41356
sp|P0A9B3|G3P_ECOL6-GANFDK	0.968129	0.7389	1.301815	0.415135	1.02379	1.68265	5.329296	0.570578	0.978503	1.68265	2.813799	0.669009
sp|P0AE52|BCP_ECOLI-FSLPDQDGEQVNLTDFQGQR	2.775883	1.163	0.967294	0.541797	3.290637	1.1847	1.0857	0.395764	3.290637	1.1847	1.0857	0.374652
sp|A1AIG0|RPOC_ECOK1-AMMDNLQTETVINR	0.809219	1.259162	0.903322	0.591623	0.597781	1.230006	0.479356	0.730312	0.565057	1.1157	0.598742	0.825423
sp|Q0TCG3|RS13_ECOL5-FVVEGDLR	0.858717	2.4608	2.175225	1.092439	1.064903	2.2148	1.049602	1.251045	1.227459	1.6531	0.646672	1.222209
sp|B7NF50|ATPA_ECOLU-GLLGR	0.87808	1.301069	1.589545	4.573416	1.141099	1.31005	2.487171	4.573416	1.090612	1.31005	1.903888	3.027573
sp|B1X8H5|SYGB_ECODH-EPVDAFFDK	2.554824	0.5629	1.271207	1.835072	2.448932	0.1362	1.363501	1.146671	2.448932	0.1362	1.3955	1.577417
sp|B5Z0E9|EFTS_ECO5E-IGVLVAAK	0.814153	1.789221	2.664777	1.96659	1.159279	2.1415	14.28953	1.580486	0.946847	2.1415	7.573715	1.747383
sp|A8A5E7|EFG_ECOHS-AGDIAAAIGLK	1.034239	0.9255	2.276909	4.250834	0.432126	0.6451	0.739785	1.437222	0.388889	0.6451	0.702103	1.993834
sp|B7LE54|FABA_ECO55-VGLFQDTSAF	1.341559	1.57145	0.794826	0.13958	1.299034	1.57145	0.972689	0.12357	1.341559	1.2893	1.188939	0.152654
sp|B7LA23|GLPK_ECO55-GAIFGLTR	3.586591	0.8639	1.197469	0.720728	3.653043	1.22685	1.197469	0.586992	2.324546	1.1405	0.94134	1.104896
sp|Q19NJ4|CH602_ECOK1-AVAAGMNPMDLK	0.29263	3.6123	0.935553	0.440228	0.999683	1.1744	0.832934	0.465903	0.943574	1.1601	1.206288	0.451938
sp|B7MGS0|DPS_ECO45-DDDTADILTAASR	1.34549	2.3497	0.743188	1.057015	1.35656	1.461	0.884624	0.573072	1.434318	1.743	0.508139	0.624506

sp|P0A6Y9|DNAK_ECOL6-DVSIMPFK	1.8295	0.6142	1.317781	2.911319	1.14172	0.8435	1.217465	0.850237	0.948243	0.7709	1.338635	0.744751
sp|K0BE10|TAL_ECO1E-MIGDLL	8.527132	0.1586	0.109952	1.538974	5.493671	1.9046	0.201937	0.960969	0.94186	1.1362	1.420372	1.176948
sp|A7ZTP1|IBPA_ECO24-SAIGFDR	3.639271	1.324916	0.139129	2.225359	3.312681	1.368261	0.257287	2.108268	6.410466	1.076615	1.706931	2.003318
sp|A1AIG0|RPOC_ECOK1-IALASPDMIR	2.558969	1.403395	0.557168	1.866905	2.703836	1.4193	0.392232	1.866905	2.167107	1.6956	0.976899	0.680722
sp|P36683|ACNB_ECOLI-LPTPEEYQTYVAQVDK	1.373861	1.25645	1.201839	0.399026	1.430736	1.2858	1.157236	0.25897	1.456364	1.2895	1.163744	0.374232
sp|P46855|YHHZ_ECOLI-DLANLR	0.764887	0.5915	1.424333	5.056658	0.538822	0.5915	1.411833	7.022546	0.129428	0.5915	0.50483	17.59038
sp|P0AC34|FUMA_ECOL6-YYDELPTEGNEHGQAFR	0.818912	1.271885	0.721572	1.176135	0.309252	1.303517	1.233903	1.099944	0.497031	1.6485	1.128116	0.776395
sp|B1IVF1|ZAPB_ECOLC-LQALLGR	0.665745	0.5081	1.704097	3.325041	0.957325	0.93325	1.704097	3.359267	0.794627	0.8411	1.754334	1.650714
sp|P06720|AGAL_ECOLI-DLNIDPATLR	1.007749	1.1932	1.040371	0.621592	0.953344	1.0945	1.20155	0.544974	0.994708	1.1056	1.272025	0.590039
sp|P39325|YTFQ_ECOLI-DAEIPVFLLDR	0.538107	1.0268	0.6569	0.213196	1.139982	1.0268	0.472686	0.412383	1.139982	1.0268	0.472686	0.327496
sp|A8A750|KATG_ECOHS-HPEALAK	6.62427	0.47725	1.69159	0.776281	3.298857	0.47725	1.181157	0.71134	2.553373	0.47725	1.678833	0.567611
sp|P00968|CARB_ECOLI-VSLDDPEALTK	0.364245	2.0339	1.562935	1.645863	0.51604	1.25465	2.055497	2.464881	0.666936	1.263	1.222123	1.593038
sp|A7ZV12|CH60_ECO24-VGAATEVEMK	1.34381	0.6974	0.32982	1.199171	1.046453	0.6711	0.935802	1.914269	1.165175	0.6974	0.914323	1.523629
sp|P0AB72|ALF_ECO57-AFQELNAIDVL	1.877693	0.6836	1.664496	0.241909	1.815045	0.7309	1.337704	0.21827	1.102918	0.6836	1.337704	0.157622
sp|A7ZHB5|SYI_ECO24-EYAATQVDGQR	1.552057	0.6445	0.806745	0.363701	1.354595	0.45905	1.068268	0.464618	1.354595	1.0127	1.099695	0.508399
sp|P15288|PEPD_ECOLI-NNDTVHDFTK	1.473896	0.679	2.373484	3.91561	0.523677	0.67985	4.735165	5.267306	0.50811	0.67985	1.798918	3.518913
sp|B7LF91|GCST_ECO55-YLLANDVAK	1.455315	1.14355	2.026652	0.775594	1.565417	1.44065	1.547942	1.438147	1.305706	1.4628	0.849223	0.733825
sp|P27302|TKT1_ECOLI-AGTHDSHGAPLGDAEIALTR	0.82792	1.5589	6.003419	1.082962	1.052118	1.7693	1.945708	1.079304	1.316573	1.6323	1.572224	1.032498
sp|P09546|PUTA_ECOLI-NTWTLLPR	1.590346	1.3175	1.033633	1.448332	1.481549	1.3175	1.033633	1.64028	1.839809	1.3175	1.033633	1.376233

sp|K0BE10|TAL_ECO1E-ELAESEGAIER	0.400672	2.9746	0.497777	1.925187	0.533229	2.9746	0.407442	1.925187	0.441188	3.0323	0.718243	1.797408
sp|A7ZSL4|EFTU1_ECO24-VGEEVEIVGIK	0.815761	0.7832	0.809402	0.163352	0.86561	0.6865	0.86194	0.173406	0.961176	1.0701	0.882481	0.203474
sp|B1IQV7|PNP_ECOLC-VAALAEAR	1.589161	0.497068	0.579368	1.796299	1.914741	0.55975	0.682547	2.323225	2.292617	0.55975	0.727397	1.838073
sp|A7ZST1|PCKA_ECO24-EDGTIDFDDGSK	2.731105	0.3902	1.262041	0.791783	2.932341	0.728	1.279964	0.72786	3.512004	0.44545	1.166492	0.679078
sp|B7UJ60|RS15_ECO27-IVSEFGR	0.780717	1.47925	0.94442	3.318922	0.998779	1.47925	1.261733	3.341998	2.043194	1.4675	1.417477	1.739062
sp|P0AEU7|SKP_ECOLI-METDLQAK	0.143568	1.258084	0.864264	0.251129	1.02841	0.976466	1.303439	0.326995	0.385641	1.17965	0.744828	0.522953
sp|A1A7M1|BAMA_ECOK1-ALFATGNFEDVR	1.224782	0.871327	0.874964	0.643501	0.814343	0.3357	0.814579	0.938683	1.154574	0.3357	0.814579	0.945962
sp|Q19NJ4|CH602_ECOK1-VGAATEVEMK	1.34381	0.6974	0.32982	1.199171	1.046453	0.6711	0.935802	1.914269	1.165175	0.6974	0.914323	1.523629
sp|P0A9B3|G3P_ECOL6-FDGTVEVK	1.638942	0.5198	1.363803	0.949735	1.316778	0.8648	0.999426	0.584052	1.274548	0.96845	0.99346	0.475142
sp|B7N1C2|RS7_ECO81-LANELSDAAENK	0.147428	1.6318	1.294711	0.212292	0.306624	1.6318	0.597189	0.567649	0.160178	1.33885	3.476744	0.717309
sp|P36683|ACNB_ECOLI-VPPGVDEAAYVK	1.196301	0.8986	4.166134	1.2973	0.995046	1.02155	0.794505	0.435527	1.988782	1.1165	0.948529	0.685941
sp|P25553|ALDA_ECOLI-ASEISALIVEEGGK	0.693373	0.5631	0.346647	0.7395	1.097524	0.48165	0.515045	1.128627	1.083386	0.5356	0.560905	0.734915
sp|A7ZS83|RL21_ECO24-MYAVFQSGGK	2.13742	0.6563	0.602589	4.335127	0.554092	0.82035	1.59573	0.985361	0.554092	0.82035	1.56311	0.904438
sp|B7MIX0|RL1_ECO45-GVYIK	0.616988	0.547278	5.183466	0.971189	0.301998	0.49585	2.26501	0.921679	0.199408	0.5245	1.016381	0.964291
sp|P63285|CLPB_ECO57-AIDLIDEAASSIR	0.720195	0.6382	0.576604	0.325573	0.696469	0.42485	1.257577	0.324609	0.696469	0.5126	0.928268	0.279672
sp|P0AFG9|ODP1_ECO57-LETIEGSK	0.338988	0.5521	4.85806	1.021317	0.283035	0.8815	2.499044	2.813131	0.999492	0.8815	2.502375	1.403638
sp|P09373|PFLB_ECOLI-GDVLNYDEVMER	0.83528	1.7069	0.745426	1.022701	0.83528	1.7069	0.69234	1.022701	1.232944	1.7069	0.968618	0.916671
sp|A7ZNR4|GATZ_ECO24-EFVFTIADK	1.191194	1.5358	0.979764	0.329633	0.849059	1.40475	0.692634	0.351972	0.807832	1.47545	0.686984	0.477177
sp|P0A7W3|RS5_ECO57-NMINVALNNGTLQHPVK	1.165064	1.64085	1.696106	0.63744	1.086837	0.89275	0.44437	0.646773	0.8317	0.89275	0.608613	0.566714

sp|P0AFG5|ODO1_ECO57-LDEPSSNK	1.988783	1.071	1.792022	0.522549	1.889097	1.02815	2.416366	0.514672	1.783133	1.054	1.247979	0.408426
sp|P0A6Y9|DNAK_ECOL6-LMEIAQQQHAQQQTAGADASANNAK	1.523783	0.9653	1.108164	0.386559	1.4378	0.9653	1.11218	0.596183	1.538507	0.9653	1.203182	0.725902
sp|P36683|ACNB_ECOLI-LAPIAAK	0.714146	1.539303	1.209489	0.534355	0.78589	0.8376	1.57489	0.590276	0.503834	0.5531	0.554672	0.726183
sp|P0AEU7|SKP_ECOLI-AQAFEQDR	1.528265	0.1648	0.907784	0.864219	1.497769	0.2326	1.167683	1.048427	1.805776	0.1648	1.078278	2.783315
sp|P36683|ACNB_ECOLI-MLEEYR	1.655573	1.004531	4.452005	1.07716	1.520365	0.89805	4.005461	2.936787	1.215747	0.89805	3.15444	2.771443
sp|P0ABC8|HFLK_ECO57-ENEQQYIR	1.791292	1.8915	1.254764	2.090605	1.763706	1.8915	1.578085	2.567198	1.729579	1.3278	1.805984	1.247753
sp|P21513|RNE_ECOLI-QAQQQTAETR	0.632532	2.222271	0.957837	0.582263	0.692536	2.146294	1.022924	1.31236	0.692536	1.784316	1.022924	1.304975
sp|B1LNK7|GLYA_ECOSM-GGLILAK	6.969996	1.15885	0.349887	0.341187	7.975636	1.15885	0.451088	0.341187	7.975636	1.15885	0.653221	0.365964
sp|P0AFG9|ODP1_ECO57-LTQEQLDNFR	0.604743	4.80025	0.483344	1.837533	2.171535	1.1949	0.500655	0.813866	0.934145	1.1949	0.500655	0.813866
sp|A7ZTU4|ATPB_ECO24-VALTGLTMAEK	0.074024	0.904711	1.407717	1.678582	0.081916	0.9453	0.855277	0.887329	0.350282	1.2552	0.855277	2.122321
sp|A7ZST1|PCKA_ECO24-LFIDNFDK	1.342965	0.3707	1.769411	0.613713	0.91165	0.519	1.356017	0.493331	0.808786	0.9738	1.769411	0.602957
sp|P0A9B0|FUR_ECOL6-VLNQFDDAGIVTR	2.807214	0.4832	2.14584	1.340101	2.807214	0.4832	1.788814	0.276819	2.807214	0.4832	2.942502	0.651172
sp|A7ZPS1|PUR7_ECO24-QAELYR	1.788174	0.873314	0.848417	8.238445	3.438891	1.2354	1.886461	8.238445	3.438891	1.2354	1.886461	8.238445
sp|P27302|TKT1_ECOLI-GGYVLK	0.184569	1.325198	1.014407	0.758552	0.212315	1.664751	0.774407	0.657937	0.310674	2.2671	0.774407	0.501938
sp|P0AF51|YJBR_ECO57-LLVQL	0.199985	1.199182	1.560327	0.612958	0.7219	1.2114	1.462797	0.263105	0.727436	0.7915	1.468567	0.295162
sp|P09373|PFLB_ECOLI-SGVLTGLPDAYGR	0.186745	0.4709	0.351059	0.422365	0.284652	0.4709	0.399175	0.427773	0.952575	0.4709	0.42008	0.325499
sp|A8A4Y7|ASSY_ECOHS-GDSVFSPDDR	0.501863	1.08181	0.53795	2.227897	0.429874	0.70225	0.391121	2.627604	0.429874	0.70225	0.665799	2.158658
sp|A8A6H0|TNAA_ECOHS-QLPCPAELLR	1.930109	0.7174	0.680644	0.313162	1.366658	0.73725	1.101938	0.28292	1.519688	0.77945	0.898041	0.289721

sp|P0A863|TPX_ECOL6-DLSDVTLGQFAGK	1.943873	0.90145	0.551991	0.599274	2.229434	0.90145	0.541828	0.74186	0.933062	0.90145	0.531665	0.989408
sp|P0AFG5|ODO1_ECO57-EVVLGMAHR	1.288046	0.782442	1.241781	3.658458	0.987139	0.5706	0.701324	1.561586	0.987139	0.5706	0.759677	0.486773
sp|P02925|RBSB_ECOLI-ILLINPTDSDAVGNAVK	0.411118	3.23	0.458922	0.517113	0.411118	3.46695	0.291195	1.543225	1.016185	3.23	0.514443	1.077818
sp|P00490|PHSM_ECOLI-EASGTGNMK	0.790066	1.2495	2.056932	1.678195	0.631346	1.2495	1.788409	1.559962	0.508223	0.5773	2.192501	1.504605
sp|P0A9Y7|CSPC_ECOL6-TLAEGQNVEFEIQDGQK	2.186387	1.032	1.441807	0.255346	2.39376	1.4348	1.303873	0.188637	2.256582	1.6026	1.048269	0.205643
sp|P0A8N6|SYK2_ECO57-VFEINR	1.124711	1.068613	1.083106	0.056681	2.255014	0.5551	0.755737	0.795929	1.817165	0.5569	0.98864	0.59488
sp|A7ZSL4|EFTU1_ECO24-GITINTSHVEYDTPTR	0.509802	0.8557	1.508098	1.740501	1.345404	0.8557	1.508098	2.182643	1.687879	0.8557	0.89545	1.823529
sp|P0A6Y9|DNAK_ECOL6-SLGQFNLDGINPAPR	1.130863	1.0465	1.117901	2.095439	1.17622	1.0865	0.718585	0.973674	0.982357	1.1194	0.746848	0.957402
sp|P00490|PHSM_ECOLI-YGLNSAAEMTPR	2.547726	0.5741	0.734728	0.415068	2.547726	0.50945	0.734728	0.509926	3.643297	0.50945	1.011816	0.373331
sp|B7LA23|GLPK_ECO55-YIVALDQGTTSSR	0.504028	0.554	2.370899	0.8885	0.692793	0.5562	1.237237	0.414113	0.66576	0.50015	1.258758	0.415808
sp|P36683|ACNB_ECOLI-EALGLPHSDVFR	3.379164	0.1559	0.205497	4.075137	3.379164	0.27665	0.145347	1.073315	3.379164	0.27665	0.145347	3.018527
sp|P63285|CLPB_ECO57-AAGATTANITQAIEQMR	0.362766	0.612732	0.784597	1.211639	0.362766	0.697379	0.317172	1.211639	0.395494	0.8861	0.39665	1.258777
sp|B5Z0E9|EFTS_ECO5E-IGENINIR	1.097877	0.6051	1.503923	0.661675	0.840541	0.6201	2.342598	0.848423	1.381556	0.6201	1.167176	0.341328
sp|A1AF92|GCSP_ECOK1-LTDILAAGLQQK	1.081435	2.68735	0.552772	0.443681	1.121427	2.8474	0.552772	0.323724	1.22665	2.8474	0.427785	0.386723
sp|B7UK34|RL14_ECO27-YAGVGDIIK	2.014729	0.718534	0.980785	13.6474	1.654641	1.10145	0.980785	1.831112	1.635934	1.10145	1.372598	1.831112
sp|C4ZPU9|RS20_ECOBW-AFNEMQPIVDR	0.813849	1.2434	3.323035	2.597572	0.89109	1.4225	1.355698	1.524455	0.978565	1.7774	1.449193	1.407145
sp|P0AG32|RHO_ECO57-VFPAIDYNR	0.77497	0.620685	1.502286	0.462929	0.732063	0.5153	2.266776	0.220921	0.415238	0.4151	0.480407	0.234122
sp|P06959|ODP2_ECOLI-QEAAPAAAPAPAAGVK	0.764889	0.809	3.152429	0.347691	0.950701	0.809	6.245199	0.229493	1.015422	0.6711	0.84089	0.366357
sp|P63285|CLPB_ECO57-GELHCVGATTLDEYR	0.971494	0.596	0.846569	3.333709	0.58135	0.7893	0.658026	2.647881	0.870445	0.596	0.711312	4.66759

sp|P0A6Z5|HTPG_ECO57-TLTISDNGVGMTR	1.124047	0.9147	0.409303	0.908574	1.005117	1.2316	0.324832	2.825606	0.950933	1.2316	0.324832	1.208594
sp|P63285|CLPB_ECO57-DEEIR	1.166605	0.7092	0.863589	1.727899	1.06364	0.7092	1.139004	1.758718	0.77234	0.92025	1.332339	1.758718
sp|B7MDM6|HSLO_ECO45-VQGEIPENADLK	1.390643	1.1416	0.246365	1.672174	1.137558	0.9281	1.096221	1.05285	1.100011	0.94915	1.189372	0.921224
sp|P33602|NUOG_ECOLI-QYQNAEDTR	2.437814	3.7308	0.70726	2.536138	5.750545	3.7308	0.635098	1.672162	2.406134	3.7308	0.635098	1.567495
sp|A8A6H0|TNAA_ECOHS-AMYSIAK	0.580772	1.4556	0.114122	0.432913	0.879894	0.9822	0.114122	0.372297	0.623418	0.857	0.176424	0.370699
sp|P08200|IDH_ECOLI-SLNVALR	2.589297	0.388912	1.60326	0.358014	1.210903	0.6995	1.336141	2.242916	0.829168	0.6995	0.601724	1.563939
sp|P0AFG9|ODP1_ECO57-VLGTDGFGR	0.370664	1.4755	0.825667	0.923942	1.016308	1.5885	0.528981	0.640684	0.640238	1.5885	0.988227	0.543232
sp|A8A5E7|EFG_ECOHS-GGVIPGEYIPAVDK	0.988571	0.61535	1.561134	2.207643	1.204691	0.7863	1.085573	1.277421	1.15751	0.7863	1.10086	1.269853
sp|A1AGK1|RL16_ECOK1-GNVEYWVALIQPGK	1.465416	1.13215	1.309304	0.527941	1.989614	1.7709	1.716538	0.428692	2.032143	2.33715	1.716538	0.432109
sp|A7ZIN4|KAD_ECO24-GTQAQFIMEK	1.015868	1.323925	0.35206	2.129518	1.513152	0.998	0.596412	2.248793	1.630791	1.3513	0.44276	1.417743
sp|P58578|GSHB_ECO57-EGDPNLGVIAETLTEHGTR	1.909573	0.6391	1.227776	0.740735	1.131525	0.7384	0.808822	1.051194	1.083217	0.6391	0.641875	1.408352
sp|P06959|ODP2_ECOLI-EAAPAAAPAAAAAK	3.429589	0.744913	0.444084	0.546563	3.429589	0.73115	0.452592	0.472031	1.40784	0.7492	0.492994	0.968216
sp|P0AFG9|ODP1_ECO57-VVADAIAK	1.211541	0.2117	0.540748	1.900702	0.866011	0.3385	1.403921	1.551446	1.255137	0.5752	1.933647	1.312693
sp|P36683|ACNB_ECOLI-QIEALQQK	0.283831	0.752814	4.945932	3.309541	0.962072	0.6908	1.041258	0.251853	1.623279	0.5263	1.039918	0.251853
sp|P0AC41|SDHA_ECOLI-AAGLHLQESIAEQGALR	1.444007	0.5641	0.80024	1.687773	2.389124	0.5641	0.31198	1.677229	2.389124	0.5641	0.31198	1.677229
sp|B7MLA1|PYRG_ECO45-LIDSQDVETR	0.267859	0.435233	0.760162	1.294001	0.245998	0.3006	0.344764	0.79908	0.167444	0.3006	0.456275	1.128632
sp|B7NF50|ATPA_ECOLU-ASTISNVVR	0.853265	1.5587	0.222811	3.630696	0.901647	0.8662	0.75213	2.819858	1.058378	0.8662	0.75213	2.819858
sp|P0AC41|SDHA_ECOLI-VTGQALTVNEK	2.11361	0.8166	0.559776	1.200018	2.172968	0.8166	0.804941	0.987538	1.559042	1.01535	0.978896	1.53389
sp|A7ZS83|RL21_ECO24-QWFTDVK	0.977821	1.2973	1.420786	0.413841	0.800874	0.944	0.723785	0.730699	1.998206	1.0053	0.723785	0.725381

sp|P0AFG9|ODP1_ECO57-FPNDVDPIETR	1.409374	2.793127	1.174363	1.066797	1.004465	3.801	1.440609	0.957404	0.923248	3.4509	1.322263	1.15557
sp|B7LA23|GLPK_ECO55-GVNANHIIR	1.767278	0.773583	4.317153	2.007449	0.501992	0.7282	3.025228	2.481166	0.457912	0.7282	3.025228	2.525883
sp|P0AG61|RS14_ECO57-EAAMR	9.757576	0.58655	1.45049	1.783137	10.35592	0.58655	0.923633	1.703206	6.565609	0.58655	0.50571	1.598958
sp|A7ZST1|PCKA_ECO24-EAEPEIYNAIR	0.882138	0.5969	0.658825	1.451733	1.02035	0.5969	1.08792	0.939799	1.431658	1.7791	1.001692	1.359585
sp|P0A9X5|MREB_ECOL6-GMVLTGGGALLR	7.108497	2.3944	0.342328	1.436287	6.488557	2.3944	0.302238	1.153028	1.887936	1.954	0.375835	1.153028
sp|P0A6Z5|HTPG_ECO57-GIEVLLLSDR	2.055056	2.2057	1.848017	1.883246	2.669676	0.9073	1.564537	2.201695	2.669676	0.9073	1.564537	2.031078
sp|B7UIL4|RS2_ECO27-TVPMFNEALAELNK	1.020301	1.3643	0.689165	0.892817	0.982538	1.76665	0.485793	0.300377	0.877072	1.8717	0.560629	0.348503
sp|B1IX65|SYE_ECOLC-SASAFNTDK	0.18089	2.2027	1.48321	0.855584	0.551301	1.57005	0.951499	1.500688	1.378059	2.6244	2.634323	1.243897
sp|A7ZUK1|RPOB_ECO24-GGVVQYVDASR	12.50681	0.6211	0.814003	0.351729	10.52689	0.6211	0.814003	0.351729	10.52689	0.6211	0.371297	0.533765
sp|P63285|CLPB_ECO57-TDINQALNR	1.515705	1.83455	0.450738	0.498661	1.515705	1.83455	0.450738	0.498661	1.515705	1.83455	0.450738	0.498661
sp|P0AFH9|OSMY_ECOL6-GYAGDTATTSEIK	1.719193	0.9071	0.67028	1.139509	2.057231	0.9071	0.719307	1.818081	2.186876	1.0211	0.964909	1.64961
sp|P0AC34|FUMA_ECOL6-DPEASENDK	3.987841	1.5474	1.197111	0.355474	3.255834	0.2164	0.953268	0.407068	4.545782	0.4134	0.953268	0.473002
sp|P62593|BLAT_ECOLX-SALPAGWFIADK	0.9076	0.768	0.937514	0.732396	1.186356	0.76625	0.742377	0.69552	1.137849	0.768	0.737287	0.534231
sp|P0A9S3|GATD_ECOLI-GSFESFAQAVR	1.376353	0.7772	1.352763	0.466021	1.421776	0.8667	1.323151	0.529609	1.332259	0.9562	1.448825	1.274422
sp|B7MLA1|PYRG_ECO45-GLDAILVPGGFGYR	0.985076	0.86585	1.1159	0.103044	1.441614	1.1089	1.320425	0.164358	1.557194	1.2099	1.866053	0.134515
sp|A7ZPA8|YFBU_ECO24-MMTMLDPANAER	2.455005	0.3583	0.96098	1.681971	0.821984	0.69485	0.842777	1.71681	1.124265	1.0314	0.990773	1.982187
sp|P63285|CLPB_ECO57-IAIEQAR	1.876809	0.3248	0.636739	0.929738	1.361707	0.3248	0.451032	0.602012	0.942796	0.3248	0.405915	0.403778
sp|P08200|IDH_ECOLI-YYQGTPSPVK	4.50747	0.7486	7.422673	0.659945	1.094043	0.7486	6.765766	2.275898	1.430389	0.5844	2.232904	0.850414
sp|P23869|PPIB_ECOLI-SGMHQDVPK	1.240917	0.533293	1.414606	1.790786	1.851587	0.3124	0.978928	1.753844	1.851587	0.3124	0.927406	1.753844

sp|B1IQV7|PNP_ECOLC-EATEQSQPAAAPEAPAAEQGE	1.524237	1.597	0.659498	2.531682	1.817163	1.6654	0.545879	3.147698	2.011422	2.5089	0.71225	3.102547
sp|B1IUY2|SYA_ECOLC-VGDAVQADVDEAR	1.664854	4.5365	1.341169	2.908505	2.362413	2.7615	1.094001	3.988513	2.089259	2.7615	1.136088	1.581007
sp|A7ZSD0|MDH_ECO24-FGLSLVR	1.40176	1.21985	1.593107	1.844282	3.071367	1.5017	5.277362	1.024209	0.85929	1.59885	4.435069	1.827955
sp|P0AG32|RHO_ECO57-GLIVAPPK	1.951061	3.5044	0.450199	1.583019	1.892252	2.54125	0.886419	1.247568	1.832844	2.2424	0.996942	0.829568
sp|P63285|CLPB_ECO57-VTDAEIAEVLAR	0.247631	1.2334	0.447928	0.882977	0.387594	1.41675	0.375201	0.803732	0.53471	1.5561	1.114551	0.822898
sp|B1LL63|ATPF_ECOSM-EIADGLASAER	0.587762	0.97605	0.583565	0.80668	2.094929	0.97605	0.59505	0.757245	2.094929	0.97605	0.755156	0.757245
sp|P36683|ACNB_ECOLI-DLVHAIPLYAIK	1.230996	0.3531	0.976741	0.373269	1.174283	0.513	0.762089	0.274552	1.020901	0.4802	1.449886	0.340977
sp|A8A6H0|TNAA_ECOHS-AVEIGSFLLGR	1.661344	1.211	1.390713	0.07706	1.328201	0.74385	1.591403	0.082798	1.157985	0.8145	1.332133	0.077691
sp|P0ABH7|CISY_ECOLI-GVFTFDPGFTSTASCESK	1.460287	0.8144	0.518398	1.052994	1.675477	0.8949	0.612938	0.810769	1.52283	0.99135	0.642194	0.909583
sp|B1XB97|HSLU_ECODH-DLTDAAVK	1.145861	2.542	0.757223	0.412523	0.645046	1.6178	0.71963	0.513934	1.341283	1.6178	0.597296	0.236335
sp|P0A6F2|CARA_ECO57-SLFDGTLQGIHR	4.801584	1.508224	0.938304	3.509754	2.747853	1.6163	1.163492	4.453899	3.931684	3.0917	1.344345	4.199833
sp|A7ZTP0|IBPB_ECO24-NFDLSPLMR	0.529701	1.02995	1.154382	1.146583	0.542212	1.02915	1.052127	1.119226	0.646475	1.02915	1.097538	0.960439
sp|B5YTN8|RL2_ECO5E-YILAPK	4.762839	1.13195	0.987514	0.439503	11.7851	0.6912	0.987514	0.328398	13.02295	0.2974	0.677609	0.877424
sp|A1AF92|GCSP_ECOK1-MMGAEGLK	4.030058	0.3067	1.180179	1.081623	4.35206	0.3067	1.206635	0.272092	3.438622	0.226	0.542614	4.665968
sp|A7ZPD1|ACCD_ECO24-LMNLPAPNPEAPR	3.82499	0.7799	0.063749	10.91964	1.724287	0.74085	0.117379	10.91964	2.124784	0.7799	0.117379	4.361931
sp|B5Z2K8|RL9_ECO5E-VANLGSLGDQVNVK	0.629752	0.8835	0.774394	0.360595	0.693812	1.08575	1.278143	0.625099	0.728815	1.2328	1.154327	0.486025
sp|P0AC41|SDHA_ECOLI-ATVLATGGAGR	0.303543	4.3157	2.927278	0.912089	0.287033	4.3157	2.666	0.976223	0.280029	4.3157	3.092228	0.937568
sp|P0A7W9|RS8_ECO57-AVVESIQR	0.47106	1.0717	0.90434	2.068526	2.115927	1.0717	0.520125	2.125957	2.115927	1.0717	0.520125	1.227381
sp|B1X9G2|OPGG_ECODH-GLAIDTALPSGEEFPR	2.336871	1.41245	0.979503	0.395641	0.918117	2.0798	1.062622	0.526149	2.447304	0.8129	0.906556	0.2945

sp|P0A9P2|DLDH_ECO57-AGVEVDDR	0.918575	0.579734	3.212094	2.268691	0.73931	0.52515	3.266768	1.710398	0.73931	0.4797	2.641463	2.75623
sp|A7ZJA8|SUCC_ECO24-DLALIEINPLVITK	1.438961	0.617958	0.358417	0.578045	0.755129	0.3907	0.984531	0.336014	0.740226	0.46485	1.466834	0.177241
sp|P0A6Z5|HTPG_ECO57-ALLGER	0.885564	0.621848	1.085533	0.859838	1.220691	0.60005	0.979814	1.735848	1.220691	0.60005	0.979814	1.986323
sp|B7MTW7|DADA_ECO81-GIVDIPVYPLK	2.058913	2.5676	1.078228	3.901885	0.953039	1.71235	0.662087	3.901885	1.360415	1.69685	0.662087	2.770803
sp|P0A6Z5|HTPG_ECO57-AADTEDEAK	1.643361	0.6604	1.928916	0.471998	1.587251	0.8276	1.86732	0.46684	1.675576	0.8276	1.919784	0.477876
sp|P23869|PPIB_ECOLI-NEANNGLK	0.559846	2.45335	2.036636	4.513824	1.197629	1.18905	2.034104	2.270001	2.457277	1.18905	1.704859	0.654121
sp|P08200|IDH_ECOLI-AAIEYAIANDR	0.901924	0.79755	1.257744	0.472064	0.835565	0.6247	1.070169	2.184944	1.015262	0.79755	1.054452	2.184944
sp|B7NF50|ATPA_ECOLU-QSVDQPVQTGYK	1.027097	1.6568	1.318471	0.789964	0.857529	0.48525	0.88613	1.187059	0.615385	0.5074	0.794948	1.575098
sp|B7MTW7|DADA_ECO81-TPAIPYEDLSVAR	0.866401	0.9611	0.51815	0.610177	1.352512	0.9945	0.821039	0.603588	1.003091	0.99	0.59895	0.749379
sp|A7ZSD0|MDH_ECO24-LFGVTTLDIIR	2.41872	0.8792	0.475263	0.601087	1.963868	0.9299	0.328939	0.58683	1.855655	1.23165	0.804694	0.313331
sp|P37330|MASZ_ECOLI-VAFINTGFLDR	5.018121	0.519	0.349874	0.201695	3.127245	1.7941	0.96241	0.382096	1.572672	1.1693	1.136085	0.382096
sp|P36683|ACNB_ECOLI-MTSVGSQDTTGPMTR	0.997306	2.3365	1.029882	0.771384	0.702495	1.50835	1.089894	1.529974	0.852334	0.8799	1.029246	0.818728
sp|P0AFG7|ODO2_ECO57-LLAEHNLDASAIK	0.202888	2.589	0.961972	0.492608	0.785786	1.015	0.868979	0.650453	0.716441	0.84215	0.830913	2.000191
sp|P0ABK6|CYSK_ECO57-NIVVILPSSGER	1.847171	1.8745	1.534366	0.60735	1.847171	1.3227	1.329026	0.663071	1.677104	1.0532	1.534366	0.718793
sp|B7MYP6|RL19_ECO81-QLEQEQMK	1.296063	1.35405	2.075581	1.020086	1.840846	1.438	1.006801	0.801948	1.840846	1.459	0.988005	1.367684
sp|P39325|YTFQ_ECOLI-LIGDWLVK	3.243104	0.6832	0.261689	0.15066	1.632162	0.848	1.38557	0.212083	1.632162	0.88815	3.746998	0.141742
sp|B7NER6|SECB_ECOLU-DWQPEVK	35.76896	1.6079	0.151621	1.759407	2.923568	1.0522	0.675071	1.721056	2.545381	1.3831	0.748144	0.365137
sp|A8A466|PGK_ECOHS-VATEFSETAPATLK	0.770529	1.6283	1.00972	0.781618	0.933028	1.0459	1.35026	0.452295	1.087995	1.0816	1.242333	0.705126
sp|B7L4J7|RL5_ECO55-MWEFFER	0.272289	0.2968	0.455575	0.287939	0.179183	3.16495	1.125452	0.277866	0.246493	1.5772	0.897714	0.26323

sp|A7ZTP1|IBPA_ECO24-KFQLAENIHVR	1.86157	1.08555	0.421409	0.863756	1.35929	1.08555	0.653377	0.509072	1.165229	0.8687	0.657387	0.780203
sp|B5Z0E9|EFTS_ECO5E-DAGFQAFADK	1.149035	1.2557	0.143913	5.161262	1.364124	0.5703	0.498108	1.463548	1.133169	1.1083	0.526624	1.786082
sp|A7ZPS1|PUR7_ECO24-LAEAGIPTQMER	0.614218	0.504275	0.88341	0.965391	0.778001	0.146	2.098078	0.145524	0.711307	0.146	1.536838	0.545295
sp|P25553|ALDA_ECOLI-GETVGQELAGNPK	2.057525	2.355	0.696298	0.69759	1.750822	2.4884	0.769929	0.600276	2.276811	2.355	0.690653	0.651274
sp|P0A435|PTKB_ECOL6-ILTILQG	0.365674	0.3024	0.753592	1.213017	0.415381	0.32145	0.762446	1.557249	0.415381	0.3024	0.753592	2.607244
sp|P0AEQ3|GLNH_ECOLI-SGLLVMVK	1.736238	0.9229	5.875608	1.510525	1.736238	0.581	5.356627	1.825497	1.736238	0.58555	4.915361	0.66937
sp|B7LA23|GLPK_ECO55-SNTGLVIDPYFSGTK	1.239882	0.41725	0.677031	0.422705	1.239882	0.4461	0.954428	0.54043	1.31089	0.4461	0.954428	0.586353
sp|A7ZV12|CH60_ECO24-EIELEDK	6.985686	1.19485	1.319935	3.505534	1.596892	2.0131	1.040258	2.000965	1.862164	1.9788	1.223679	0.728629
sp|A7ZTH0|TDH_ECO24-EMFETWYK	1.875947	3.25155	1.773974	0.248428	1.984564	3.25155	2.131893	0.228851	2.739646	2.08915	2.131893	0.554136
sp|B1X8H5|SYGB_ECODH-LQTVLFQQQLGTLR	4.158085	1.4632	0.216936	0.796586	4.158085	1.4632	0.216936	0.796586	2.556201	1.1932	0.379804	0.853714
sp|P0AE52|BCP_ECOLI-AGDIAPK	11.01121	0.3926	2.115701	1.049205	11.99604	0.8086	1.058352	0.991646	12.96381	0.8086	1.09908	0.941638
sp|P62593|BLAT_ECOLX-ILESFRPEER	1.020834	1.554323	1.935743	0.067507	1.014635	1.205138	1.777924	0.067507	0.678687	1.6744	1.609845	0.767176
sp|P0AE52|BCP_ECOLI-AGVDVLGISTDKPEK	0.242048	1.349561	2.234915	0.594214	0.270783	1.7219	2.184198	0.672903	0.632463	1.77625	0.934861	0.54668
sp|B7M107|RL30_ECO8A-EDTPAIR	3.419895	2.1026	0.802216	3.566987	2.333007	1.91415	0.825024	3.10293	1.525127	1.91415	0.794705	3.021826
sp|P0AGD5|SODF_ECO57-GTAFEGK	1.361916	0.27235	2.029773	1.883565	2.338462	0.2893	1.217224	1.623935	3.088451	0.56095	1.217224	1.508797
sp|A7ZTP1|IBPA_ECO24-VIPEAK	0.319213	0.7775	4.001493	1.461964	0.407656	0.7775	0.884138	0.775388	0.384303	0.7557	0.932275	1.076755
sp|A7ZJZ6|SERC_ECO24-GQFAAVPLNILGDK	0.537798	0.82035	0.63643	1.061186	0.618902	0.6571	0.755206	1.297355	0.720152	0.6481	0.918529	1.471732
sp|P0ABH7|CISY_ECOLI-MLEEISSVK	0.64444	0.725	0.04721	1.861629	0.756912	0.7023	0.107637	1.715244	0.717165	0.7023	0.392637	1.514563
sp|A1AIG0|RPOC_ECOK1-LLDLAAPDIIVR	0.716815	0.585861	1.858929	1.064616	0.241412	0.42	2.627731	0.926908	0.657121	0.42	1.833449	0.401505

sp|A8A466|PGK_ECOHS-ADLNVPVK	0.211093	1.1822	0.229315	0.286688	0.348752	1.1822	0.438591	0.639276	0.688518	0.8029	1.050467	0.679856
sp|P0A6Y9|DNAK_ECOL6-HSQVFSTAEDNQSAVTIHVLQGER	1.12326	1.0693	2.625117	1.488339	2.587556	1.0693	2.625117	2.135325	2.587556	0.86215	2.625117	1.737839
sp|B1IQV7|PNP_ECOLC-GDISEFAPR	1.118204	0.923302	2.729468	0.736017	1.392409	0.82094	0.874028	0.747592	1.006951	0.5869	1.124046	0.649123
sp|P0ADU3|YGIN_ECO57-ILQPGI	1.117494	1.307471	1.133066	1.244445	1.740015	2.0167	1.179732	0.950932	1.739785	1.11215	2.170893	0.646585
sp|A7ZSJ0|RL15_ECO24-VEGGVVDLNTLK	0.052362	0.578821	1.287057	1.294167	0.784447	0.912	0.67861	0.708583	0.644825	0.912	0.657654	0.656872
sp|B7MLA1|PYRG_ECO45-QLYNAPTIVER	0.108889	0.58285	0.820749	0.7094	0.108889	0.58285	0.820749	0.7094	0.497759	0.8907	0.692965	0.7094
sp|A1AGK1|RL16_ECOK1-VLYEMDGVPEELAR	1.014957	1.0175	0.990742	0.651709	1.064431	1.01305	0.990742	0.63266	0.944599	1.2455	1.026444	0.606167
sp|P36683|ACNB_ECOLI-AGFLAAIAK	0.290554	0.291	1.895321	0.553377	0.227413	0.4422	2.515639	0.73074	0.217435	0.5934	1.005165	1.168823
sp|B7UIL4|RS2_ECO27-AGVHFGHQTR	1.085126	0.556725	0.73603	1.157075	1.37078	0.539	1.030077	1.323619	1.37078	0.539	1.022481	1.340346
sp|P27302|TKT1_ECOLI-SGHPGAPMGMADIAEVLWR	2.343027	1.16385	0.83246	0.162916	3.913463	1.78605	2.370208	0.375932	2.875946	1.60835	1.20562	0.261455
sp|B7M2A7|PROQ_ECO8A-IGIFQDLVDR	1.822453	1.1784	1.285841	0.189209	0.895075	1.1784	1.681764	0.254196	0.895075	1.1784	2.85447	0.254196
sp|B1XAH2|HEM3_ECODH-ALVGAPDGSQIIR	0.726427	0.8622	0.267261	0.67108	1.20986	1.002	0.24477	0.473809	1.086606	1.1418	0.348653	0.489574
sp|B7UK21|RS11_ECO27-ALNAAGFR	1.694004	0.2847	0.440648	0.913868	1.156058	1.23	1.204177	0.731702	1.543088	1.23	1.226351	1.749812
sp|A1AIA7|HSLV_ECOK1-ALLENTELSAR	0.701886	0.4077	2.349091	1.312909	0.370254	0.4077	1.488329	0.230007	0.545164	0.4077	0.846725	0.201924
sp|A7ZUK1|RPOB_ECO24-AYDLGADVR	1.010762	1.6765	1.558519	1.330988	1.205807	1.6583	1.121974	0.72532	1.263624	1.33425	1.081614	0.510116
sp|A8A5E7|EFG_ECOHS-GQYGHVVIDMYPLEPGSNPK	1.264017	1.424872	0.297706	1.389567	1.131325	1.769599	0.500955	1.916153	1.151455	3.26885	0.223983	1.916153
sp|B5Z3U4|TIG_ECO5E-ELFEEQAK	1.139051	1.0918	0.396999	2.73285	1.652811	1.3672	1.691207	1.304337	0.997618	1.5256	2.467427	1.060784
sp|P0AB72|ALF_ECO57-GEDQPNK	1.875508	2.837	1.298542	0.978948	2.150048	2.69705	1.184804	0.86907	2.170988	2.837	1.160164	0.977499

sp|P0ADZ2|RL23_ECO57-APHVSEK	0.662449	1.013888	0.725082	0.126164	0.666186	1.28215	0.662912	0.248464	0.515621	1.28215	1.056511	0.27047
sp|P08200|IDH_ECOLI-EEFGGELIDGGPWLK	2.9559	3.0014	2.154517	0.225489	2.763461	3.0743	1.284929	0.486016	3.142265	3.1353	1.37869	0.679177
sp|A7ZTP0|IBPB_ECO24-NEPEPIAAQR	1.001151	0.7907	0.889255	0.658291	1.368608	0.7654	0.983319	1.664802	1.297047	0.7257	0.910807	0.922762
sp|P0A6Z5|HTPG_ECO57-VLQMLEK	0.865821	0.3232	0.550613	0.744264	1.242172	0.3232	0.550613	0.715937	2.625517	0.47165	0.804247	0.680248
sp|Q46834|YGHF_ECOLI-AMIALMR	3.364812	0.758747	0.760112	0.296527	1.852225	0.751845	0.721535	0.272463	1.980635	0.7984	0.721535	0.272463
sp|P0AG32|RHO_ECO57-VNEVNFDKPENAR	3.533504	0.623555	0.306367	1.927202	1.208092	0.4977	0.878604	0.704051	1.213247	0.4196	0.767191	0.803897
sp|P0A7W0|RS4_ECO57-EKPTWLEVDAGK	8.468877	1.39225	1.287074	0.985969	3.484377	1.39225	1.443408	0.878806	2.187837	2.45865	1.178437	0.988072
sp|A1AF92|GCSP_ECOK1-EVAVFPAGVADK	1.915179	0.7721	0.529574	0.909699	1.192582	0.7721	0.49508	0.852572	1.119167	0.74575	0.563734	0.523608
sp|P0AEH6|ELAB_ECOL6-SSGDPADQK	4.117835	3.6716	1.488376	0.329692	4.198797	3.6716	1.477614	0.58585	5.180392	2.8597	1.423274	0.476392
sp|A7ZKD6|YCDX_ECO24-GMAPIAEFADL	1.755914	1.51705	1.104888	0.093966	1.865478	1.2869	1.055935	0.15297	1.738505	1.2915	1.106836	0.150063
sp|P69778|LPP_ECO57-IDQLSSDVQTLNAK	2.477561	1.27065	1.45159	0.330908	1.657005	0.9875	1.271476	0.281388	1.41471	0.9875	1.719644	0.327808
sp|A7ZV12|CH60_ECO24-FGNDAR	1.697506	0.3568	0.453146	0.961928	1.93307	0.3568	0.569318	1.484093	1.84392	0.3568	0.502209	0.262025
sp|A1AGC3|RS9_ECOK1-AGFVTR	0.277386	3.046508	0.437522	4.057294	0.934173	4.375474	0.965035	4.057294	1.402673	6.946	2.036422	1.68028
sp|B1X8H5|SYGB_ECODH-GEWLLYR	4.148953	2.2647	1.077421	1.626461	5.303615	1.5997	0.640825	1.626461	2.024462	1.5997	0.958479	1.626461
sp|P00968|CARB_ECOLI-TPASFEPSIDYVVTK	2.28991	0.3468	1.301614	0.538387	1.892481	1.0571	1.462617	0.506807	1.728772	1.0571	0.996517	0.274553
sp|P0A6Y9|DNAK_ECOL6-DQGIDLR	0.942438	0.5737	1.36053	1.24641	0.451392	0.5508	0.922992	8.153209	0.589698	0.5737	1.316102	5.320423
sp|B7MYP6|RL19_ECO81-VWVVEGSK	0.562618	1.8615	1.878087	1.960912	0.536094	1.8615	1.372816	1.500822	0.665197	2.10205	1.081383	1.492542
sp|P0A6Y9|DNAK_ECOL6-LPADDK	0.568899	1.69585	0.258324	1.061319	2.760854	1.2558	0.714487	0.940216	2.013618	1.66705	0.814788	0.807785
sp|P0A9A7|FTSZ_ECOL6-NAADEDR	1.017501	3.246323	0.332353	0.79741	1.406438	3.4812	0.723075	0.827012	1.259985	3.03815	0.723075	1.745442

sp|A8A4Y4|IF2_ECOHS-GDIVLCGFEYGR	1.07277	1.1046	1.094135	1.867715	2.972537	1.1046	0.647805	2.999845	2.17819	0.6721	0.622252	1.256726
sp|P0AFF8|NUSA_ECO57-EITLEAAR	1.342133	5.0986	2.000671	0.555502	2.918015	5.0986	1.491122	0.871071	0.93459	3.72815	1.495875	1.685595
sp|A7ZTU4|ATPB_ECO24-DLEHPIEVPVGK	0.169936	0.33705	0.730628	2.173924	0.424255	0.33705	0.805882	2.104403	0.80376	0.3648	0.95912	1.050811
sp|P0A9P2|DLDH_ECO57-ALLHVAK	1.312032	1.2204	9.496209	0.373467	0.567939	0.7746	2.997532	0.386101	0.552104	0.59485	2.997532	0.711183
sp|P13035|GLPD_ECOLI-YLVDHEWVR	0.165698	2.1176	0.585712	8.646629	0.165698	0.8946	0.511698	3.625201	0.165698	0.8946	0.420149	3.65749
sp|P0AEQ3|GLNH_ECOLI-SGTGSVDYAK	9.919679	0.4217	0.976334	3.414855	1.507817	0.5934	0.818706	0.359247	1.330983	0.8831	0.650426	0.435774
sp|A7ZIN4|KAD_ECO24-IILLGAPGAGK	0.288484	0.3647	1.756831	0.407747	0.543065	0.4444	1.36655	0.884956	0.648191	0.4476	1.01184	0.311891
sp|A8A5E7|EFG_ECOHS-AGPLAGYPVVDMGIR	0.60905	0.75575	1.317099	0.283333	0.60905	0.75905	0.918884	1.304132	0.549047	0.5501	0.858454	1.043057
sp|A1AIG0|RPOC_ECOK1-VTAEDVLKPGTADILVPR	0.596767	0.822	0.782131	0.997945	1.009077	0.4813	0.799936	1.191943	0.902659	0.4409	1.097563	1.077206
sp|P39325|YTFQ_ECOLI-STLYLPDTAK	1.321432	0.3189	2.981775	0.407961	0.809543	1.6398	1.157318	0.424887	0.633116	1.6398	1.477499	0.547501
sp|A7ZQP6|FUCI_ECO24-TYWSPEAIER	0.618905	1.64745	0.782613	0.678937	2.858133	1.3477	0.683009	0.476019	1.660849	1.3477	0.641139	1.003498
sp|A1A7M9|ACCA_ECOK1-NFGMPAPEGYR	1.245465	8.9616	0.467157	1.530612	0.94026	8.9616	0.51862	1.020734	1.339198	4.5324	1.326082	1.8803
sp|P25553|ALDA_ECOLI-AQPEWEALPAIER	1.09156	0.71555	3.355032	1.279447	1.2459	1.0096	3.355032	0.951479	1.392349	1.0096	3.156522	1.279447
sp|P0A8C6|YGFB_ECO57-VTGETGEAIDDLR	1.160988	1.9109	0.501418	1.747265	1.98684	1.9794	0.436986	0.830772	1.542347	1.9794	0.436986	1.739447
sp|P76558|MAO2_ECOLI-LTEFVYK	2.143877	1.255	1.731704	3.563873	10.84281	0.6809	2.201238	1.06564	1.027085	0.96795	2.236659	1.182807
sp|P36683|ACNB_ECOLI-GGGLCLGGK	3.965241	1.30665	0.149232	3.237958	0.66044	2.0408	0.564618	2.289152	0.477563	2.1176	0.626836	3.625907
sp|P0A6Y9|DNAK_ECOL6-IAGLEVK	0.327028	0.39585	0.78837	1.270197	0.416237	0.9073	1.036159	1.064876	0.67923	1.09385	1.490179	1.029377
sp|B7UIL4|RS2_ECO27-AASEAVK	1.895486	0.84845	1.81661	0.821895	1.200913	0.84845	2.105813	0.88244	1.286868	0.84845	1.755859	0.88244
sp|B7UK34|RL14_ECO27-MIQEQTMLNVADNSGAR	2.176285	0.57345	2.231725	0.949169	1.112799	0.7571	1.088845	1.195783	1.28354	0.7571	1.088845	0.87135

sp|P09546|PUTA_ECOLI-GVDMAMR	3.989285	1.49653	0.789033	4.571658	5.9709	0.865398	1.793611	4.641869	4.70659	0.796155	0.789033	2.248866
sp|B1IT06|RS6_ECOLC-LEDWGR	3.634837	1.274879	2.25567	2.603205	5.985505	1.3428	2.036307	1.140415	4.975011	1.3428	8.453106	1.140415
sp|P08839|PT1_ECOLI-NTNFEDAK	0.363686	1.8159	1.248092	1.043976	0.342104	2.47405	0.139791	0.102452	1.746928	2.0131	0.494596	0.474626
sp|P0A9P2|DLDH_ECO57-YDAVLVAIGR	0.555719	0.8862	3.693074	1.577619	0.645188	0.8854	2.091267	2.0688	0.542661	0.8846	0.779058	1.406516
sp|A7ZTH0|TDH_ECO24-NVVITDVNEYR	1.574725	0.8962	1.111768	0.2928	1.237586	0.4428	1.222349	0.168353	0.652502	0.5227	1.079616	0.222904
sp|B1IX65|SYE_ECOLC-ALDFIAER	2.706256	1.422618	0.322173	1.763413	1.783952	1.4225	0.480548	1.348187	2.516004	2.3796	0.480548	1.212868
sp|B6I586|SYH_ECOSE-NVLGSYGYSEIR	0.83205	0.3962	1.212029	0.174811	0.332166	0.705	2.265457	0.38967	0.962296	0.5406	1.783984	0.444481
sp|P63285|CLPB_ECO57-ESDEASK	5.824845	4.49835	1.84469	0.76956	7.71744	3.7415	1.008611	1.739099	8.308794	3.7415	1.204368	1.410045
sp|A1A7K0|GSA_ECOK1-IIGGGMPVGAFGGR	0.914536	0.937229	0.735733	0.416743	1.178633	0.4507	1.01723	0.177038	1.698925	0.5161	0.821927	0.471242
sp|A8A6H0|TNAA_ECOHS-DWTIEQITR	1.513855	2.73465	1.060112	1.027808	1.492592	2.38875	0.872968	1.456078	1.678058	1.8514	1.519762	1.373465
sp|B7MTW7|DADA_ECO81-AETNIQYEGR	2.230422	1.6777	0.804181	0.633906	2.182492	1.6777	0.804181	0.382832	0.299414	1.2145	0.556438	0.130339
sp|P00968|CARB_ECOLI-QPANATVTAIEMAVEK	2.570488	1.7412	1.028113	0.056836	1.429761	1.1039	1.210663	0.06856	3.687489	1.1039	1.691453	0.096192
sp|P0A6Z5|HTPG_ECO57-YIFELNPDHVLVK	1.851514	1.2997	0.531627	0.153582	4.840038	2.0399	0.945031	0.182543	2.483531	1.40345	0.610349	0.182543
sp|B7MLA1|PYRG_ECO45-SVIEALK	0.148075	1.034968	1.098176	1.039948	0.170004	0.976396	2.257597	1.177378	0.62354	1.140706	2.257597	0.816257
sp|C4ZZ44|ILVC_ECOBW-GFGVPTLIAVHPENDPK	2.027945	1.03575	1.089563	1.143841	1.282837	0.9096	1.251941	0.597005	1.341676	0.9163	1.455046	0.658982
sp|B1LNK7|GLYA_ECOSM-SPFVTSGIR	4.246019	1.3693	0.863375	0.228936	3.120283	1.17755	0.863375	0.236691	2.782273	0.9858	0.762321	0.228936
sp|A7ZV12|CH60_ECO24-EMLPVLEAVAK	1.066749	1.4017	1.52727	0.257269	0.837546	1.8673	1.140292	0.362442	0.84268	1.40075	1.13686	0.33003
sp|A7ZS83|RL21_ECO24-ITGISA	0.060811	0.46365	0.708197	0.256593	0.153839	0.5449	1.073764	0.347945	0.153839	0.4704	0.718805	0.472919
sp|B5Z3U4|TIG_ECO5E-ELPELTAEFIK	1.034425	1.0583	1.396358	0.120101	1.217645	1.01635	1.237383	0.123697	1.226699	0.9765	1.059594	0.12146

sp|A7ZSD0|MDH_ECO24-NLVQQVAK	1.535545	0.5929	1.315781	0.812325	1.003937	0.5573	1.113603	1.186601	1.309181	0.6285	1.436726	0.963622
sp|P0AAI9|FABD_ECOLI-ITFNAPTVPVVNNVDVK	0.043653	2.8355	1.390024	0.124669	0.119701	3.8673	1.390024	0.086126	0.133557	3.8673	0.678605	0.113742
sp|P0A6Y9|DNAK_ECOL6-VAEFFGK	0.724329	0.95065	1.651428	0.170224	0.819531	0.8818	1.095317	0.463703	0.95203	1.6555	0.882408	0.42339
sp|P0A7W0|RS4_ECO57-GNTGENLLALLEGR	0.845133	1.39255	1.478646	0.33824	1.070803	1.5265	1.480062	1.395979	0.748842	1.4012	1.359906	1.408336
sp|A1A7K0|GSA_ECOK1-NAVIEAAER	0.827324	0.4514	0.344048	1.602873	0.839091	0.39045	0.235398	2.38456	0.937178	0.4514	0.235398	1.901427
sp|Q19NJ4|CH602_ECOK1-AMEAPLR	0.890598	1.178748	1.36816	1.514474	0.890598	1.342847	1.452059	1.43155	0.590703	1.7033	0.542708	1.863168
sp|P26648|FTSP_ECOLI-GSIGQLLVNPVP	0.763603	0.945645	9.383966	1.959376	0.508349	0.6923	9.383966	1.871176	0.547431	0.6923	8.097046	1.883522
sp|B1IQV7|PNP_ECOLC-DAQVLDELMGER	0.696183	1.588942	0.883787	0.438101	0.696183	1.470609	1.031487	0.508417	0.780085	1.368874	1.238266	0.331874
sp|B7M1N3|RL4_ECO8A-SILSELVR	5.326308	1.553861	0.841625	1.660344	2.833271	1.8812	0.823496	2.839624	2.833271	1.8812	0.800191	2.839624
sp|P0A9Y7|CSPC_ECOL6-GFGFITPADGSK	1.135313	0.6991	0.9535	0.302636	1.102707	0.6721	1.041861	0.420631	1.091683	0.71665	1.120014	0.396121
sp|P36683|ACNB_ECOLI-SPLLTPEK	1.800953	0.38895	1.250673	3.969913	1.285338	0.554	3.000254	0.814942	1.151956	0.4836	1.908386	1.412156
sp|P0A9Y0|CSPA_ECOL6-SLDEGQK	1.851492	0.3602	0.64242	0.437057	0.89988	1.38485	2.821216	0.382924	1.771409	1.7614	1.692928	0.51715
sp|B7UIL4|RS2_ECO27-DLETQSQDGTFDK	1.12636	0.3316	2.239557	3.56233	0.814953	0.3316	0.935727	2.678438	1.938146	0.67285	0.935727	1.124391
sp|P09394|GLPQ_ECOLI-DDNLVVLHDHYLDR	2.312451	1.465953	2.113946	6.616033	1.898763	0.8877	2.113946	8.785334	2.428479	0.8877	0.519141	3.002799
sp|A7ZUK1|RPOB_ECO24-LNHLVDDK	1.043779	1.49735	0.727843	0.788248	1.206191	1.1361	0.727843	0.484743	1.282258	1.1361	0.558729	0.953493
sp|P0AB53|YCHN_ECO57-EQESNLDLR	1.49617	1.4989	8.062332	0.667942	0.993282	1.4989	13.15202	1.349071	1.197727	1.4989	10.90804	0.999323
sp|A7ZSJ4|RL6_ECO24-YADEVVR	0.840736	0.771	2.150929	1.075057	1.352413	0.771	2.4254	1.39074	2.115373	0.771	3.20907	1.806918
sp|A7ZUJ6|RL11_ECO24-SMGLVVED	1.053781	1.124665	0.941111	1.384848	0.929669	1.2256	1.029687	2.600313	0.809802	1.2686	0.951625	1.707551
sp|B7M1N4|RL3_ECO8A-MIGLVGK	0.769093	0.5841	0.69281	0.32738	1.112878	0.5841	0.637547	0.20581	1.12537	0.5841	0.504831	0.18571

sp|A1AIG0|RPOC_ECOK1-FATSDLNDLYR	0.731611	1.2205	0.316	2.254762	1.75236	1.2205	0.241408	1.427447	1.75236	1.2205	0.241408	1.427447
sp|A8A750|KATG_ECOHS-ALPVLEK	1.086089	0.3655	0.696547	0.39931	1.01274	0.3655	0.619436	0.430641	1.076939	0.3655	0.320088	0.359636
sp|P0A7W0|RS4_ECO57-VVNIASYQVSPNDVVSIR	2.720381	1.4529	0.717242	0.450517	1.638122	1.4484	1.162062	0.445712	1.638122	1.4484	1.162062	0.445712
sp|P0A6Y9|DNAK_ECOL6-ASSGLNEDEIQK	0.852569	1.933	0.758895	1.012357	1.313784	1.6149	0.913508	0.896373	1.752274	2.0001	0.94521	0.910503
sp|P36683|ACNB_ECOLI-ADGVIFQTAV	0.800819	1.323	1.211107	1.781247	0.939726	0.9992	1.149595	1.684136	0.91623	0.9542	1.088421	1.555257
sp|P00954|SYW_ECOLI-AVTDSDEPPVVR	2.559738	1.882	0.882353	1.005999	1.853692	1.9801	1.01874	0.996769	1.710031	1.882	0.976347	0.960918
sp|B5YQG1|FETP_ECO5E-EAEGQDFQLYPGELGK	0.890417	1.3902	0.943331	0.200057	0.68254	2.9018	1.613008	0.292769	0.745452	1.8056	2.250578	0.288154
sp|B7MIX0|RL1_ECO45-VAVFTQGANAEAAK	0.295126	1.9817	0.286475	2.274506	1.315789	1.8107	0.286998	1.464892	1.315789	1.8107	0.286998	2.030565
sp|B7N1C2|RS7_ECO81-ILPDPK	0.726584	0.3575	0.298473	0.628316	1.065734	0.3954	1.822596	0.44995	0.994465	0.6071	2.061913	1.038384
sp|P0AAI6|FABF_ECOL6-AEAQAVK	3.601412	3.0601	3.49051	1.272543	2.382259	1.2686	1.05198	0.598962	0.278818	1.1215	1.05198	0.829676
sp|A7ZV12|CH60_ECO24-ALSVPCSDSK	1.020169	0.7023	0.978077	0.765212	1.405766	0.7023	0.995254	0.646902	1.112819	0.7181	0.951359	0.562611
sp|P60624|RL24_ECOLI-SNSETIK	1.361251	1.099211	0.557814	0.948173	0.952335	0.72485	0.798572	1.036159	0.901434	0.72485	1.117566	0.729098
sp|A7ZS83|RL21_ECO24-IGVPFVDGGVIK	2.981202	1.2097	3.189668	0.521224	0.652412	0.45395	0.93266	0.251542	0.462884	1.0664	3.34954	0.414739
sp|A7ZJA8|SUCC_ECO24-QPDLR	2.884171	0.6405	0.122211	1.735635	0.170538	0.6405	0.096753	1.303481	0.193572	0.6405	0.150226	1.294721
sp|P37665|YIAD_ECOLI-ADSVASALITQGVDASR	5.971648	1.09678	1.289785	1.439012	5.586424	1.082063	1.047707	1.135202	5.586424	1.294409	1.020119	1.035662
sp|P0AFG5|ODO1_ECO57-LSGEDSGR	2.821437	0.5828	0.746389	0.460886	2.821437	0.55585	0.556637	0.591784	2.821437	0.5828	0.742057	0.525761
sp|P08200|IDH_ECOLI-DSVTLVHK	0.593811	1.0718	0.731126	0.628032	0.741928	0.86115	0.700248	0.462719	0.760427	0.86115	1.293478	0.882275
sp|P23857|PSPE_ECOLI-VPEQYQQEHVQGAINIPLK	0.303386	0.641621	0.727502	3.60842	1.436435	0.758117	1.022245	0.866693	1.079039	0.72355	0.833247	1.211226
sp|B7LD85|SYS_ECO55-GEDIEPLR	1.78522	1.63095	1.865609	0.727836	1.482692	1.6165	1.061496	0.575387	1.925049	1.81575	1.479266	1.467654

sp|P07014|SDHB_ECOLI-FLIDSR	0.478807	1.7465	1.032315	0.352941	0.689873	1.97505	1.256681	0.301362	0.905144	1.97505	1.256681	0.391879
sp|P45523|FKBA_ECOLI-EFDNSYTR	1.390491	1.7245	1.356215	1.630518	1.261581	0.93275	1.356215	0.834734	1.261581	0.93275	1.356215	0.834734
sp|P0ABK6|CYSK_ECO57-LQEDESFTNK	1.122803	1.2154	1.658112	0.516897	1.433912	0.77445	1.035481	0.516561	1.865156	0.6798	0.991403	0.542705
sp|P27302|TKT1_ECOLI-ALSMDAVQK	1.590826	1.062328	1.026078	0.777239	1.030073	2.7254	1.457303	0.69974	1.294873	1.3578	0.782259	1.773475
sp|P0AA18|OMPR_ECO57-YLTEQGFQVR	8.867328	1.125	0.615136	0.945121	2.710898	1.1002	1.145901	0.444464	3.810918	1.1002	1.145901	0.444464
sp|P04825|AMPN_ECOLI-GLLQHR	0.713718	3.685664	3.28728	1.605402	0.902465	6.0301	5.423963	1.755733	1.205057	6.0301	4.225323	1.755733
sp|P0A9A0|FTNA_ECO57-LSLAGK	0.593955	1.2253	0.806559	0.683274	1.124192	1.2253	1.79278	1.071339	0.656924	1.1642	2.782723	0.758426
sp|A7ZTU4|ATPB_ECO24-VYDALEVQNGNER	1.42545	1.0638	0.432847	0.149341	1.42545	1.0638	0.71922	0.278234	1.269235	0.7308	1.054461	0.568786
sp|B7LA23|GLPK_ECO55-TMLFNIHTLDWDDK	0.316147	5.5134	6.07175	0.671721	0.358321	5.5134	7.107727	1.029077	0.234984	3.7653	4.395821	0.983474
sp|P0AEY0|MALE_ECO57-GYNGLAEVGK	0.892577	2.72365	1.662903	0.414543	2.326751	2.6294	2.29956	0.211781	2.326751	2.6294	2.130794	0.211781
sp|A7ZNR4|GATZ_ECO24-VGPALTFALR	0.80152	1.036159	0.85601	0.482984	0.912817	1.020048	1.034183	0.741156	0.804265	0.56765	4.460702	0.682468
sp|P09546|PUTA_ECOLI-EVFGPVLHVVR	0.803527	0.411072	1.207548	1.172605	2.235822	0.4473	0.818309	1.34279	0.789444	0.4473	1.209397	1.34279
sp|P0AEQ3|GLNH_ECOLI-AVGDSLEAQQYGIAFPK	0.691603	0.663509	0.428925	0.768945	1.497467	0.5644	0.633483	0.8858	0.890489	0.5644	0.633483	0.819296
sp|P04825|AMPN_ECOLI-GLENLSGDLYEK	0.229843	1.152524	1.664421	10.21953	0.229843	0.945668	1.664421	1.310876	0.406577	0.9598	1.380857	1.846062
sp|P0A9S3|GATD_ECOLI-YDFIGSR	1.162926	0.7513	0.894115	1.059033	1.532914	0.7513	0.869267	1.157866	1.578532	0.7513	0.880321	1.004877
sp|P06959|ODP2_ECOLI-AEAPAAAPAAK	1.393763	1.0523	1.161692	0.281406	1.781594	1.4	1.457741	0.236881	1.428232	1.4	1.313163	0.258605
sp|P08200|IDH_ECOLI-ISWMEIYTGEK	2.393818	0.9289	3.369506	0.798798	1.880101	0.2958	0.683285	0.669068	1.412654	0.5198	0.749619	1.718354
sp|B7MRB2|RL7_ECO81-VAVIK	2.636321	0.2514	8.409584	1.232011	2.636321	0.9235	6.359597	1.03583	2.919347	0.9532	1.034403	0.976538
sp|C4ZZ44|ILVC_ECOBW-EIMAPLFQK	1.055521	2.01605	4.854118	1.13399	2.084197	0.6835	0.973719	1.070884	2.845178	0.6258	1.048118	0.835934

sp|P63285|CLPB_ECO57-ASLSGTQTIK	0.950616	1.0322	0.50974	0.725318	0.724213	1.0322	0.500971	0.978911	0.619088	2.3064	0.563202	1.048392
sp|A7ZPS1|PUR7_ECO24-NDTSAGDGAR	8.886979	2.523481	0.592453	0.765841	3.041385	2.9663	0.694074	0.643453	3.041634	2.08965	0.694074	0.63885
sp|B1IVF1|ZAPB_ECOLC-NNSLSQEVQNAQHQR	2.308035	0.478	1.369122	3.821659	3.723469	0.5676	1.070354	1.06774	1.696088	0.5228	0.878173	1.432088
sp|B1XFM6|CLPX_ECODH-FGLIPEFIGR	2.417085	0.7109	1.085008	0.05524	1.992828	0.7109	0.977482	0.067184	1.684216	0.8199	1.05414	0.081604
sp|A8A6H0|TNAA_ECOHS-EEAIIK	0.716759	0.64145	0.82615	4.445296	0.767399	0.5991	1.1578	0.714772	0.825372	0.755	1.196297	0.589597
sp|P0AG68|RS1_ECOL6-GATVELADGVEGYLR	1.811424	1.297661	0.451938	1.072059	2.658504	1.4101	0.451938	0.159834	5.209308	1.4101	1.884843	0.72844
sp|P12758|UDP_ECOLI-NDLQGATLAIVPGDPDR	3.089306	1.2068	1.07335	0.520769	1.682178	1.2332	0.533452	0.425908	1.111479	1.2068	0.481957	0.323317
sp|P0AGD5|SODF_ECO57-AQFTDAAIK	0.727451	1.0578	1.160231	0.790787	0.82863	1.0823	1.299777	0.840959	1.436971	1.10925	1.303216	0.815383
sp|A7ZPW6|PEPB_ECO24-ITLSTQPADAR	0.43899	1.1742	0.798009	1.137258	0.409042	1.1742	0.634783	1.070218	0.7348	1.56135	1.011951	1.103702
sp|P75694|YAHO_ECOLI-GADVLVLTSGQTDNK	1.331982	1.8682	0.989442	0.420048	1.407501	1.5216	0.909788	0.39838	1.312585	1.5216	0.871814	0.382016
sp|A7ZSD0|MDH_ECO24-DIALGEEFVNK	1.399869	0.9429	0.772216	0.868053	1.032979	1.02735	0.884079	0.480389	1.020332	1.21925	0.871238	0.39619
sp|P0A9B3|G3P_ECOL6-VGINGFGR	4.457468	1.39645	0.641973	0.135863	5.203624	1.39645	0.846961	0.661483	4.579526	1.3477	0.839452	0.661483
sp|B7UIL4|RS2_ECO27-VHIINLEK	0.441541	1.0048	0.85036	0.195965	0.441541	1.0228	1.20656	0.679833	0.488708	1.0228	1.20656	0.693255
sp|A7ZUK1|RPOB_ECO24-SVGEMAENQFR	4.463689	1.1146	0.86843	1.608344	1.692422	1.1146	0.761092	0.712858	2.177885	1.1146	0.702773	0.712858
sp|A7ZHT6|SYP_ECO24-TGDIVEYLVK	1.928818	0.89265	1.403767	1.405588	1.740516	0.38765	0.985281	1.405588	1.03945	0.54105	0.459445	1.254189
sp|P21513|RNE_ECOLI-VPLPVVAQTAPEQQEENNADNR	0.573538	0.885838	0.958928	6.112598	1.4947	0.83155	1.02538	5.789991	0.692446	0.9677	0.872055	5.590849
sp|A7ZSD0|MDH_ECO24-SDLFNVNAGIVK	1.694451	1.0623	0.383123	0.210344	4.305922	1.38095	0.293255	0.175274	3.968683	1.2647	0.674718	0.180804
sp|P0A7W3|RS5_ECO57-AYGSTNPINVVR	2.023837	0.8392	0.992631	0.457663	1.998074	0.8392	0.958001	0.422537	1.783473	1.2193	0.958001	0.454522
sp|P09394|GLPQ_ECOLI-GASGYLPEHTLPAK	0.878486	0.8921	0.904973	1.201624	0.802161	0.8921	0.988959	1.188982	0.702209	0.90255	0.941547	0.986873

sp|B7UIL4|RS2_ECO27-LENSLGGIK	1.862259	2.3497	0.770584	0.868355	0.405791	2.21005	0.770584	1.047331	1.55436	2.0704	1.554774	1.047331
sp|P0AEY0|MALE_ECO57-DLLPNPPK	0.766386	1.42465	0.861759	1.005942	1.430135	1.4877	0.921093	0.955782	1.527873	1.3616	1.091254	0.62565
sp|B7MZ75|ENO_ECO81-YVLAGEGNK	0.456541	1.1449	1.435488	0.727828	0.34911	1.20675	1.39977	0.724587	1.137532	1.3347	0.99218	0.688765
sp|P0A9Q7|ADHE_ECOLI-QILLDTYYGR	1.398201	1.8247	1.68816	11.74953	1.695137	1.8247	1.188647	11.74953	2.364971	1.8247	1.084079	4.143506
sp|B5Z3U4|TIG_ECO5E-ETTFNELMNQQA	1.09488	1.4891	1.859559	1.67508	1.317704	1.7075	1.703954	1.67508	1.079619	1.40655	1.20465	1.635692
sp|A7ZP63|GLPB_ECO24-EPILGLDVLQTATR	0.462284	1.00095	1.48738	0.393245	0.914973	1.00095	0.508398	0.560167	1.249288	1.3093	0.667295	1.931113
sp|P23843|OPPA_ECOLI-LGMDR	1.526146	0.2116	7.671032	10.36882	0.480383	0.2116	7.671032	4.173293	0.719557	0.6071	7.671032	1.052452
sp|P0AGF0|SUCD_ECOL6-VGIVSR	0.954415	0.690411	0.80848	3.347036	0.542734	0.751428	0.521039	19.5316	0.738822	0.749676	0.521039	19.5316
sp|P19926|AGP_ECOLI-WPEWDVPGGQLTTK	0.880948	1.2719	1.053394	0.250364	0.773368	1.2693	1.471826	0.262231	0.773368	1.2568	1.089293	0.439772
sp|P0A9B3|G3P_ECOL6-DPANLK	0.721039	2.97	1.510204	4.139456	0.875904	1.3352	2.555718	4.139456	0.841407	1.3352	0.812723	2.072328
sp|P0A8M1|SYN_ECOL6-VSTLDLENLPR	1.257255	1.1763	2.679815	0.761487	0.778814	0.64315	0.847233	0.464415	0.778814	1.1763	1.326981	0.234694
sp|P0A8N6|SYK2_ECO57-ASFVTLQDVGGR	0.640279	2.0133	1.141178	1.022934	0.738294	1.3971	0.907505	0.883836	0.670604	1.2109	0.933842	0.838566
sp|C4ZRQ8|DAPD_ECOBW-VGINELLR	0.317931	2.7337	0.693463	0.287718	0.273099	1.8714	0.384863	0.271518	0.316269	1.63615	0.310418	0.415294
sp|B7LA23|GLPK_ECO55-AMAWEEHDE	0.653777	1.3262	0.467869	2.440068	0.818504	1.096	0.530574	1.701001	0.698906	1.41985	0.422301	1.480022
sp|P0A6Y9|DNAK_ECOL6-DDDVVDAEFEEVK	1.330101	1.5964	1.089096	0.268586	2.161622	1.50755	0.941466	0.339849	1.460129	1.5055	0.777393	0.420033
sp|B7LA23|GLPK_ECO55-ETTIVWEK	0.589432	0.8653	0.67022	0.763901	1.138554	0.758	0.662364	0.736826	1.27014	0.807	0.736735	0.727964
sp|A1AIG0|RPOC_ECOK1-AAAESSIQVK	0.622589	1.3841	0.914665	0.476334	1.877839	0.8885	0.406474	0.36642	1.877839	0.8885	0.186412	0.458828
sp|B7ULJ1|RL33_ECO27-LVSSAGTGHFYTTTK	0.789604	1.20725	0.401835	2.299812	1.209012	1.20725	0.597216	2.299812	1.024058	1.20725	0.914833	2.299812
sp|B1X8W6|ARNB_ECODH-AIIPVHYAGAPADIDAIR	0.944276	3.0873	0.704205	1.585338	1.144107	1.47505	0.639822	1.136549	1.053004	1.0747	0.758061	1.111162

sp|P0AFG9|ODP1_ECO57-LPYITFPEGSEEHTYLHAQR	2.499435	0.6198	0.965263	0.292752	2.836775	0.7318	1.268475	0.362855	2.968719	0.6672	0.965263	0.530505
sp|A1AGI6|RPOA_ECOK1-DVLASR	1.742055	0.952021	1.027909	0.22613	1.854978	1.0066	0.971892	0.22499	2.132814	1.4053	0.6652	0.14844
sp|P0A9A0|FTNA_ECO57-ELSTLDTQN	0.180454	2.5399	3.136851	2.01273	0.586893	1.04195	1.909531	1.655999	0.897507	1.1427	1.573776	1.874341
sp|P33602|NUOG_ECOLI-ASVESNFALR	0.607434	3.2402	0.624488	0.787858	0.465191	3.2402	0.860096	0.747735	0.638399	3.2402	0.836753	0.530701
sp|P0A9X5|MREB_ECOL6-NYGSLIGEATAER	1.02105	1.031963	0.449874	0.635482	1.826379	1.006159	0.290417	0.134357	2.130572	0.4488	0.702962	0.635482
sp|P00968|CARB_ECOLI-GLDLSPTK	0.945059	0.8837	1.095223	0.325138	0.774349	0.9843	1.317858	1.045385	0.424886	0.934	1.431785	1.047295
sp|A8A0Q4|IHFA_ECOHS-TGEDIPITAR	0.84842	1.4585	1.243886	0.462432	1.01142	1.4585	0.748256	0.655074	1.01142	1.4585	0.748256	0.808886
sp|B7MGS0|DPS_ECO45-ATNLLYTR	0.682185	0.750864	1.371164	0.32965	1.335133	0.879991	2.00756	0.308457	1.335133	1.01343	0.494921	0.362811
sp|P0A6Y9|DNAK_ECOL6-VLENAEGDR	1.348822	0.81	0.778448	4.434171	1.662429	0.81	0.778448	2.912495	1.246821	1.1658	0.399249	4.168412
sp|A7ZSL0|RS10_ECO24-DQYEIR	2.324799	1.2219	0.94146	3.981431	2.34938	1.2219	1.006645	3.981431	2.076206	1.6646	0.990604	2.881569
sp|P33602|NUOG_ECOLI-APVEDQAR	0.836257	1.401528	6.748936	2.890955	1.203997	1.266204	7.718493	4.387108	4.582278	0.7968	3.758863	2.719796
sp|P0AC34|FUMA_ECOL6-TYLYQETK	0.255256	2.183553	2.26192	1.11747	0.202823	2.508885	1.952186	1.03397	0.74435	3.308	6.354541	0.587765
sp|P0ABC8|HFLK_ECO57-AQTILEAQGEVAR	3.919445	1.14462	1.021189	0.536494	1.46061	1.108232	1.183054	0.486829	1.46061	1.074484	0.570867	0.475749
sp|P0ABH7|CISY_ECOLI-HTMIHEQITR	0.371082	0.93325	1.711854	0.166995	0.998372	0.93325	1.711854	0.163724	0.998372	0.93325	1.300764	0.554231
sp|P0A6Z5|HTPG_ECO57-GTLEDPNLFIR	0.727348	1.1288	0.951361	1.840465	1.531126	1.1288	0.612081	1.2736	1.566078	1.1742	0.724632	1.658595
sp|P0AB82|ILVE_ECO57-AGGNYLSSLLVGSEAR	0.618104	0.66985	0.681748	0.465534	0.898198	0.6597	0.872965	0.461068	1.125492	0.6597	1.21542	0.461068
sp|A7ZTP1|IBPA_ECO24-FQLAENIHVR	0.360413	1.185021	0.419211	4.871498	0.360413	0.65263	0.419211	4.871498	0.360413	0.512888	0.31645	3.396226
sp|A7ZRU7|RS21_ECO24-AGVLAEVR	1.272418	1.130476	1.605616	2.050828	1.758417	0.8519	1.040027	2.15762	1.37045	0.8519	0.474437	2.189627
sp|A7ZST1|PCKA_ECO24-MQLIGGTWYGGEMK	0.590143	0.8916	0.836475	1.918333	0.454449	0.932	0.744215	0.704454	0.464656	0.96215	0.815337	0.653149

sp|B7UK21|RS11_ECO27-QGNALGWATAGGSGFR	1.384161	0.731969	0.664061	1.647416	0.944505	0.6667	1.046548	2.019993	0.944505	0.6667	0.811924	1.957452
sp|P36683|ACNB_ECOLI-VADGATVVSTSTR	4.002651	1.39605	0.839992	2.116212	5.424594	1.39905	1.313143	0.829871	4.46885	1.30735	1.184719	0.662039
sp|P08200|IDH_ECOLI-GPLTTPVGGGIR	3.749533	1.01065	2.905815	0.854867	0.884179	1.1814	1.28919	0.933498	1.837696	1.1814	1.065047	1.06926
sp|A7ZHT6|SYP_ECO24-AGPGSLGPVNMPIPVVIDR	1.185632	0.80595	0.69372	0.740846	1.184509	0.80595	0.796116	0.690998	1.185632	0.80595	0.917907	0.604806
sp|P03852|YPB1_ECOLX-NIMVQGADFR	0.800427	0.4699	0.596143	1.124914	0.549549	0.605	0.659866	1.003743	0.800427	0.53745	0.67197	0.527558
sp|B7MGS0|DPS_ECO45-ATVELLNR	0.736876	1.661238	1.49056	1.455814	1.093099	2.2236	1.838941	1.455814	1.093099	1.3426	2.082529	2.462578
sp|P62593|BLAT_ECOLX-QIAEIGASLIK	5.540439	1.6313	1.27693	2.545485	0.808249	1.6016	1.27693	1.032966	0.962282	1.2271	0.769289	2.216326
sp|A1AGI5|RL17_ECOK1-AGDNAPMAYIELVDR	1.448336	1.0891	0.206844	0.173505	2.533569	0.6944	0.265299	0.261592	2.179257	0.6944	0.409413	0.185858
sp|A7ZUJ6|RL11_ECO24-SFTFVTK	0.824346	1.17725	0.456788	0.344397	0.824346	1.17725	0.520013	0.54581	3.010984	0.9234	0.589754	0.683727
sp|P0A9P2|DLDH_ECO57-GVHEGHVAAEVIAGK	0.308568	0.837575	4.41957	0.465967	0.178279	0.827544	13.32347	0.452004	0.513725	0.5604	3.930218	1.060473
sp|Q0TF64|SYE_ECOL5-SASAFNTDK	0.18089	2.2027	1.48321	0.855584	0.551301	1.57005	0.951499	1.500688	1.378059	2.6244	2.634323	1.243897
sp|A1AGI6|RPOA_ECOK1-IAYNVEAAR	0.931741	0.714503	1.12652	0.958366	0.743016	0.184	1.685059	0.575964	0.743016	0.184	2.802345	1.529077
sp|P0A8A0|YEBC_ECOLI-LGGGDPDANPR	0.609856	0.4296	1.923997	0.936625	0.676304	0.4763	1.59144	0.966949	1.329631	0.66775	1.014328	1.885423
sp|P0AA18|OMPR_ECO57-SVANAEQMDR	4.297232	2.9037	0.377307	0.768109	2.724043	2.9443	0.480243	0.519069	2.433232	1.8929	0.480243	0.521405
sp|B7MZ75|ENO_ECO81-AAAAAK	2.443606	3.2428	1.02396	5.142367	1.453348	3.2428	0.627043	0.307369	2.70514	2.4625	0.588604	0.929252
sp|P0A9B3|G3P_ECOL6-LVSWYDNETGYSNK	0.832377	0.9442	0.673542	1.339053	0.586555	0.9998	0.680486	1.206666	1.141662	0.972	0.816272	1.21208
sp|P00968|CARB_ECOLI-SLAEQGVTK	0.261386	1.8488	1.805437	5.799871	0.88724	1.34655	2.187135	7.749433	1.568543	0.8443	1.477477	3.052831
sp|P0ABS3|DKSA_ECO57-TVTHMQDEAANFPDPVDR	1.64308	0.6325	0.953892	3.5529	1.040973	0.9349	0.837574	2.762052	1.780511	0.9349	0.654709	2.095218
sp|P03852|YPB1_ECOLX-FVNTDVGVPQGSQQHPAMQIR	0.499731	0.710892	2.329001	0.45584	0.740333	0.5212	1.600199	0.36505	0.808535	0.5212	0.590782	0.460599

sp|P0A3B2|TYPA_ECO27-LDYVIPSR	0.142399	3.295443	0.746485	0.668901	1.208994	3.6518	0.404596	0.787435	1.417901	3.6518	0.881477	1.426272
sp|P0A9S3|GATD_ECOLI-DGGFAEYIVVK	1.13572	0.69505	0.443457	0.418939	1.206958	0.4552	0.437602	0.787639	1.288054	0.9349	0.482278	0.736366
sp|B7MLA1|PYRG_ECO45-IPGLLK	1.24003	0.392391	1.010314	1.245478	3.611034	0.423759	1.311745	1.04795	3.611034	0.365	0.552991	1.878673
sp|P09546|PUTA_ECOLI-GESNILLER	0.858085	1.31781	1.884343	0.851307	0.478435	1.47585	1.321172	1.611042	0.621655	1.47585	1.047344	1.373624
sp|P0A910|OMPA_ECOLI-GMGESNPVTGNTCDNVK	1.365628	1.5377	1.088138	0.283083	1.277562	1.18625	1.214862	0.833995	1.213153	0.8955	1.429314	0.716476
sp|A8A5E7|EFG_ECOHS-GQESEVTGVK	1.06556	0.7367	0.941883	0.877105	1.116842	0.5331	0.943727	0.926394	1.116842	0.5331	0.943727	1.41873
sp|P0A9G6|ACEA_ECOLI-TQQIEELQK	1.838393	1.975039	0.641346	3.80958	2.744649	4.8146	0.426551	7.305246	6.137589	2.84555	0.052071	1.844763
sp|P0A910|OMPA_ECOLI-LGGMVWR	1.201901	3.2006	1.516681	2.166943	1.2171	3.2006	1.757748	3.316259	1.572046	2.5445	0.273963	1.650332
sp|B7M1N4|RL3_ECO8A-NLLLVK	0.229374	0.9238	2.952666	3.143091	2.529901	1.2107	3.191156	1.182273	2.529901	1.0187	2.269691	1.317088
sp|P0A9A7|FTSZ_ECOL6-LDEFETVGNTIR	1.106218	0.7778	0.522035	2.950097	2.203236	2.82435	0.550637	1.945878	3.01379	2.82435	0.330198	0.509754
sp|P0AEH6|ELAB_ECOL6-VSQASDSYYYR	4.000123	1.052	1.435515	0.637852	1.180086	1.09255	1.114059	0.76793	0.96157	1.052	1.36788	0.41646
sp|P00968|CARB_ECOLI-EYQIMR	0.778187	0.562295	1.156364	2.671378	1.404122	0.6877	0.4692	3.452982	1.404122	0.6877	0.4692	3.171626
sp|A1AGC3|RS9_ECOK1-GGGISGQAGAIR	1.627154	1.35785	1.272727	1.764429	1.564118	1.8675	1.405983	1.878594	1.43764	1.7211	1.240428	1.556756
sp|A1AGC3|RS9_ECOK1-QPLELVDMVEK	0.263523	1.7061	1.755998	1.366558	0.694954	2.6282	1.376813	1.420604	0.718992	3.71825	3.216763	1.420604
sp|P0A9B3|G3P_ECOL6-KVVMTGPSK	0.920048	0.5077	0.634211	1.580854	0.920048	0.5077	1.12473	1.478085	1.228971	0.6829	0.852936	0.608238
sp|P0A807|RRF_ECO57-EAELMQF	1.672812	1.23585	0.954722	1.819744	2.338776	0.6347	1.007685	1.658597	2.338776	0.6347	1.007685	2.110582
sp|P00490|PHSM_ECOLI-YSDGDK	2.842885	1.8089	0.631386	0.772877	3.719228	0.6316	0.69655	1.064557	3.719228	0.76055	0.904263	1.354692
sp|P77774|BAMB_ECOLI-ISQATGSTEIDR	0.759454	0.434	0.631065	0.225727	0.219255	0.5303	0.601188	0.193306	0.804033	0.5303	0.847981	0.193306
sp|P0AFG9|ODP1_ECO57-MNMDGVR	0.261873	0.6645	0.662799	1.25672	0.375223	0.9144	0.338263	1.382217	0.375223	2.0063	0.338263	1.382217

sp|B7M1N4|RL3_ECO8A-DLANDGYR	0.662956	1.1192	1.732202	1.209363	3.115153	1.2505	0.573777	2.257617	3.834898	1.1117	0.72185	2.305469
sp|P0ABH7|CISY_ECOLI-QLYTGYEK	1.094374	1.0564	0.852279	1.872633	0.832055	1.1008	0.90914	0.801854	0.941167	1.1304	0.975006	0.642853
sp|P0AFG9|ODP1_ECO57-LFAEQVR	13.04435	4.7485	3.657845	1.494475	9.440567	2.94585	2.841273	1.2192	6.777921	0.98975	3.68021	1.916784
sp|P0ABC8|HFLK_ECO57-DQGPPDLDDIFR	5.349275	0.90535	0.413969	0.863537	4.619886	0.668	0.519261	0.862147	3.292596	1.2132	1.137928	1.23946
sp|P0A7D6|PURA_ECO57-GIGPAYEDK	2.347577	1.12745	1.835047	0.729347	3.274733	0.7561	1.38533	0.56543	2.550801	1.028	1.552298	0.744062
sp|P09546|PUTA_ECOLI-AQMDGLEGYPVYTR	1.211121	0.81042	0.58448	1.230605	0.575673	0.8298	0.673808	1.662453	0.572768	0.8298	0.673808	1.685956
sp|B7LE54|FABA_ECO55-GELFGAK	0.638256	0.9314	0.238327	2.335967	0.629007	0.63865	0.375281	2.226167	0.47397	0.9314	0.145077	1.607045
sp|P77395|CNOX_ECOLI-NEEALELLFGHLR	0.641301	1.319743	1.121129	0.414809	1.055568	1.607	1.324971	0.386532	1.29535	0.7208	1.429538	0.346886
sp|P02925|RBSB_ECOLI-ELANVQDLTVR	1.678931	1.8776	0.910355	2.332258	1.048866	1.4238	0.822282	1.203807	0.983396	1.6507	1.065326	0.732431
sp|A7ZHB5|SYI_ECO24-AAQEDILK	2.106927	2.85335	2.817483	0.870594	2.106927	1.24065	2.817483	0.482018	1.669588	1.2692	2.817483	0.725696
sp|P0AC34|FUMA_ECOL6-ALLTPGK	0.414142	3.8674	0.069511	6.828461	1.216276	0.432	0.189872	6.426917	1.216276	1.2897	0.630587	5.869453
sp|P15288|PEPD_ECOLI-AALIAK	2.039747	3.2761	36.74016	2.957836	0.653794	1.74355	10.74005	1.48817	0.336008	0.56615	5.129032	1.28974
sp|P0A819|METK_ECO57-NIVAAGLADR	12.39802	2.4723	0.469554	1.103463	6.638273	2.3164	0.643453	0.661579	6.638273	2.3164	1.024203	1.264005
sp|P0AGF0|SUCD_ECOL6-FAALEAAGVK	0.868535	0.5597	0.874757	1.24234	0.720797	0.6777	1.224018	1.159145	0.805518	0.6777	1.440576	0.814436
sp|P0AC41|SDHA_ECOLI-EVLESR	0.885675	0.572448	12.83736	2.075791	0.901347	0.450619	7.053011	3.233007	0.347858	0.701	7.053011	2.538194
sp|A7ZSL4|EFTU1_ECO24-ALEGDAEWEAK	1.585899	2.0276	0.670546	0.879579	1.083643	1.2467	0.626387	1.510108	1.567818	1.4219	0.725397	1.091599
sp|B7MRB2|RL7_ECO81-GATGLGLK	0.836379	2.1704	0.415004	0.834008	0.710337	0.6362	0.698473	0.659744	1.090768	0.6427	0.977878	0.704073
sp|B6I5E3|LEPA_ECOSE-VDALALITHR	0.395562	0.5889	1.255205	1.123155	0.41128	0.432	0.957325	1.345992	0.440179	0.432	1.13346	1.103783
sp|A8A6H0|TNAA_ECOHS-GAEQIYIPVLIK	1.064332	0.8577	0.610033	0.562727	1.076065	0.70505	0.51574	0.60059	0.97922	0.8808	0.725799	0.577062

sp|A8A5E7|EFG_ECOHS-VEVETPEENTGDVIGDLSR	1.102127	1.46825	0.486351	1.466738	0.791463	1.034	1.441322	0.922533	0.935003	1.2308	1.110521	0.695191
sp|A7ZTP0|IBPB_ECO24-LANALQNAGESQSFPPYNIEK	0.898681	0.476	0.700808	0.788753	0.399683	0.9057	1.752899	0.57719	0.404866	0.9057	1.249816	0.574756
sp|P36683|ACNB_ECOLI-WMIAEGYGDR	0.788059	1.057313	0.278934	1.045993	0.109486	1.2248	0.284561	0.628008	0.109486	1.2248	0.284561	0.489016
sp|Q1R626|RL18_ECOUT-EAGLQF	2.978822	0.1841	1.078575	2.55004	0.589557	0.7713	0.675722	2.76866	0.611952	0.7713	0.678973	1.426643
sp|A7ZQ54|GRPE_ECO24-SMLDVVR	0.621846	0.998238	1.839748	0.330805	0.700658	0.873296	2.181972	0.314506	1.433348	1.116269	1.684002	0.290603
sp|B7N6A6|NDK_ECOLU-MLHLTVEQAR	1.77478	0.1962	2.977822	1.424417	2.650216	0.1962	2.857668	1.282194	3.200512	0.3572	1.737209	4.201431
sp|A7ZPD1|ACCD_ECO24-EGVVVPPVPDQEPEA	0.972213	1.1614	0.674653	2.182543	1.085914	1.1154	0.924871	2.070039	1.362843	1.1614	1.174761	1.994773
sp|A1A7K0|GSA_ECOK1-ADGAYLYDVDGK	1.342769	1.4385	1.636127	0.662265	1.873196	1.8865	1.294048	0.917787	1.838896	1.8865	1.255925	1.538162
sp|A1AGK0|RS17_ECOK1-HPIYGK	0.776455	1.49585	0.866898	0.426836	0.976889	2.8377	1.192088	0.483043	0.666311	2.8377	0.766291	0.652952
sp|P00968|CARB_ECOLI-FPGVDPLLGPEMR	2.426233	0.93615	0.701604	0.773364	2.144583	0.8623	0.761425	0.694769	2.890902	0.7882	0.761425	0.834781
sp|P0A6Z5|HTPG_ECO57-DGETVISWEK	1.081424	1.3699	0.763997	0.357302	1.246486	1.3699	0.954471	0.466684	1.449262	1.3699	1.025262	0.447449
sp|B5Z2K8|RL9_ECO5E-MQVILLDK	0.506609	0.99595	1.883825	0.288658	3.047786	0.91	1.5614	0.293884	0.635667	0.5898	1.539354	0.269929
sp|B5Z2K8|RL9_ECO5E-AGDEGK	3.408986	1.48645	0.679959	0.434844	3.189986	1.73185	0.711465	0.675184	2.42472	1.6308	0.694146	0.690672
sp|B5YXD9|ATPD_ECO5E-AGDMVIDGSVR	1.346115	2.23135	0.554587	0.979409	1.391423	2.23135	0.566639	0.802018	0.987714	1.0209	0.577528	0.633974
sp|P63285|CLPB_ECO57-GTLADILK	0.117615	0.3405	0.345861	0.289293	0.299442	0.5086	2.151994	0.289293	0.299442	0.5253	2.133808	0.289293
sp|Q8FB69|PUR2_ECOL6-LADDEQVVTSGGR	1.141737	1.163	0.278662	0.289931	1.177484	1.2545	0.407617	0.266168	1.017664	2.2106	1.095764	0.874923
sp|P0A7W3|RS5_ECO57-VFMQPASEGTGIIAGGAMR	1.004404	0.61485	0.203225	0.280377	1.168553	0.9467	0.315953	0.280377	0.61123	1.14005	0.379593	0.302887
sp|P39325|YTFQ_ECOLI-GFAEAIK	0.78783	0.1862	0.470142	3.800833	0.431205	0.3358	0.390094	1.184845	0.484928	0.3358	0.249057	1.184845
sp|A7ZUK1|RPOB_ECO24-DDIIDVMK	1.399735	1.675192	0.781562	0.988412	1.012457	2.93905	1.044561	0.74882	1.012457	1.7251	1.620133	0.866687

sp|P0A7V4|RS3_ECOL6-EFADNLDSDFK	2.572825	1.5594	0.942349	0.36243	2.286229	2.5175	2.665151	1.484114	2.552031	2.5175	3.047962	1.715581
sp|P0A9A7|FTSZ_ECOL6-VIGVGGGGGNAVEHMVR	1.115432	1.631	0.400791	0.852753	1.115432	1.631	0.400791	0.852753	1.115432	1.631	0.749085	0.852753
sp|A8A6H0|TNAA_ECOHS-ENAANIK	0.743829	0.9135	0.885653	0.686729	0.743829	0.714	0.885653	0.668442	0.946418	0.714	1.006763	0.484296
sp|P0A3B2|TYPA_ECO27-VEETEDADAFR	1.4022	1.80215	1.92406	2.369525	0.967193	1.3191	0.995086	2.59687	1.074309	1.3191	1.113522	1.83631
sp|P0A7V4|RS3_ECOL6-ADIDYNTSEAHTTYGVIGVK	0.475611	0.3303	0.130578	1.088688	0.48219	0.5108	0.153679	1.020268	0.92	0.5859	0.246623	0.53852
sp|B7M1N4|RL3_ECO8A-KVDVTGTSK	1.247085	2.985727	0.390944	0.979985	0.552779	3.6776	0.390944	1.2251	1.204457	0.8423	0.61518	0.917329
sp|A7ZUJ6|RL11_ECO24-AQLQEIAQTK	1.121604	0.92355	0.485222	2.870453	0.810385	1.09945	0.533957	0.660944	1.034469	0.9354	0.645296	1.045058
sp|P0AFF8|NUSA_ECO57-AMVVDQFR	5.048738	1.214167	1.195554	0.391124	5.048738	1.200338	1.195554	0.357802	3.940701	1.4584	0.60366	0.560891
sp|P06720|AGAL_ECOLI-NILGDVFHR	1.29764	1.93535	25.73748	0.297264	1.08892	1.758461	2.550183	0.776961	1.08892	1.544713	2.550183	0.776961
sp|P0AG32|RHO_ECO57-GNGSTEDLTAR	1.690082	2.3188	1.314865	1.494096	2.748647	2.14045	1.050138	1.875162	3.448864	2.3188	1.092402	0.99706
sp|P0A910|OMPA_ECOLI-AALIDCLAPDR	0.962165	1.063876	1.039578	0.55187	1.207312	0.969914	1.191884	0.385394	1.052462	0.9005	1.001033	0.479798
sp|B7M2A7|PROQ_ECO8A-AEQQAK	2.963892	0.59685	0.42204	0.264623	1.844953	0.8614	0.299693	0.265847	1.437762	0.8614	1.031087	0.466628
sp|P61517|CAN_ECOLI-LTGLEPGELFVHR	0.789987	0.9729	1.041891	1.123935	1.028226	0.73225	0.910246	0.933885	0.690991	0.81	0.910246	1.807336
sp|P00490|PHSM_ECOLI-VFLFGAK	1.200502	1.0029	1.75	0.210946	0.685218	0.83105	0.918033	0.177726	0.472074	0.6592	0.789646	0.134835
sp|P23847|DPPA_ECOLI-GYVVDPLGK	0.249764	0.966094	0.269912	0.936441	0.078403	0.811431	2.186984	0.943372	0.344907	0.833913	0.084333	0.752249
sp|Q1R626|RL18_ECOUT-VQALADAAR	0.758549	1.446691	1.056089	0.967338	1.844592	1.41753	0.429834	1.622793	1.414835	1.4682	0.257333	1.510925
sp|P00968|CARB_ECOLI-EYEMEVVR	0.717868	0.732207	0.502095	0.765508	0.765906	0.7465	0.442821	0.949681	0.443116	0.6275	0.424964	0.814866
sp|A1AJD7|F16PA_ECOK1-VTPVGTPVTEEDFLQPGNK	0.882186	2.5433	14.09682	1.267814	0.755264	2.15015	14.09682	1.267814	0.450613	1.7956	4.068341	0.958469
sp|P0AFG7|ODO2_ECO57-GLVTPVLR	1.952892	1.226303	0.363826	0.533793	1.037522	0.846015	0.412761	1.266619	0.900182	0.8684	0.296224	1.266619

sp|A8A6H0|TNAA_ECOHS-NIFGYQYTIPTHQGR	0.321591	1.1862	3.34491	0.810258	1.01063	1.1862	1.51238	2.676453	0.980545	0.8043	1.382304	1.243165
sp|A7ZST1|PCKA_ECO24-YTDTPAGAALVAAGPK	0.502605	1.69655	0.413281	0.986217	1.242595	1.35915	0.22602	0.380737	1.924071	1.35915	0.856183	0.288744
sp|P0AA06|PTHP_ECO57-LMAELE	0.707157	0.119	0.50139	0.285766	0.600592	0.8329	1.020632	0.310357	0.688652	0.3406	1.117181	0.453247
sp|A1AGI6|RPOA_ECOK1-VTLEPLER	1.445899	0.90985	0.758148	0.538759	1.061048	0.6994	0.72091	0.543868	0.652503	0.89025	1.081282	0.837252
sp|B5Z3U4|TIG_ECO5E-EVIEFYSK	0.573925	0.7383	0.351362	0.388641	1.033827	0.7383	0.26873	0.500072	1.044284	0.7383	0.329655	0.420075
sp|A1AC10|PURT_ECOK1-AFLGLPVGGIR	2.126189	1.8215	1.476424	0.793319	2.309998	1.8215	2.408548	1.673434	2.309998	1.8215	2.408548	1.673434
sp|A7ZNH9|YEEX_ECO24-EIQDVEK	0.413098	2.14135	1.632585	1.243414	0.705839	1.0001	0.189302	1.009536	0.799635	1.0001	0.92845	0.617188
sp|A7ZUK1|RPOB_ECO24-SPGVFFDSDK	0.097053	1.155	0.244433	0.744934	0.037547	1.155	0.31101	1.671803	0.22471	0.99445	0.905129	1.355805
sp|P0AEQ3|GLNH_ECOLI-QFPNIDNAYMELGTNR	2.735823	0.817147	0.555233	0.826533	6.866581	0.8472	0.912038	1.093515	1.441985	0.60765	1.276305	0.76014
sp|P00509|AAT_ECOLI-GSALINDK	2.508881	1.0766	0.554424	0.828127	1.49704	1.05485	0.729703	0.837797	1.104779	0.8735	0.706466	0.78056
sp|B7UJP9|YAJQ_ECO27-VQAQIQGDEIR	2.267298	0.740396	0.230686	0.488613	2.187503	1.0024	0.213736	0.193841	2.026235	1.0596	0.185566	0.212866
sp|B7MZ75|ENO_ECO81-GMPLYEHIAELNGTPGK	0.859386	1.3648	0.88269	0.753226	0.836209	1.5868	1.030342	0.517131	0.896361	1.3648	1.012991	0.553087
sp|B5Z3U4|TIG_ECO5E-GLIEEMASAYEDPK	1.530538	1.402559	0.192494	0.799905	0.951471	1.66775	1.672019	1.044555	1.20074	2.2005	1.722165	0.645791
sp|P0AEY0|MALE_ECO57-QTVDEALK	1.191255	0.501	0.525671	9.879285	1.397192	1.14935	0.570874	1.862451	1.19404	1.1946	0.556352	0.729071
sp|P27550|ACSA_ECOLI-IAAGDTSNLGDTSTLADPGVVEK	0.158398	0.7099	0.573845	8.42744	0.398061	0.7099	0.416955	1.643107	0.514657	0.7099	0.324212	1.631082
sp|P22188|MURE_ECOLI-DLLAPWVPDAPSR	1.100774	1.0326	2.596391	0.253464	1.064679	1.0326	2.125807	0.340865	0.90917	1.0326	1.84781	0.253464
sp|P09546|PUTA_ECOLI-GAYWDSEIK	1.815457	0.4796	0.082252	1.621484	3.982487	0.46255	0.050375	2.121225	1.029152	0.5098	0.488726	1.921956
sp|P0A802|RPOZ_ECO57-VTVQDAVEK	0.341079	1.0525	1.480987	0.338323	0.578856	1.1597	1.093735	0.538007	0.69172	1.0525	0.912895	0.447904

sp|B7MZ75|ENO_ECO81-DAGYTAVISHR	1.022354	0.786625	0.707475	1.422174	2.393588	1.3079	0.840009	0.901026	1.768365	0.3245	0.606827	3.561459
sp|P0AG68|RS1_ECOL6-DAIATVNK	1.56004	0.7762	0.622357	0.617218	2.029855	4.1464	2.037294	0.73628	1.940349	0.7762	3.332119	0.647428
sp|P0A7B0|IPYR_ECO57-MTDEAGEDAK	4.179837	2.80015	1.494869	0.999576	5.325177	2.7263	1.146503	0.975202	1.755212	2.2032	1.157704	0.870337
sp|B7MDM6|HSLO_ECO45-NNASPADPQVH	2.537157	3.71	0.617199	9.21534	2.537157	2.6008	0.970419	4.249607	0.920974	2.6008	0.633895	4.282824
sp|B7M1N4|RL3_ECO8A-GFAGTVK	3.53238	1.80575	2.925465	1.656087	2.535873	0.7977	9.689033	1.203097	2.954655	0.76155	4.14782	1.487299
sp|A7ZSJ0|RL15_ECO24-GFEGGQMPLYR	0.938263	1.1221	0.385361	1.860583	0.570615	1.3088	0.629508	1.860583	1.084053	1.21545	0.729798	1.351427
sp|A7ZV12|CH60_ECO24-AVTAAVEELK	5.417853	0.1897	1.009259	1.578947	2.349196	0.5834	2.006861	1.005624	0.854311	0.4434	2.046984	0.945448
sp|P0AG68|RS1_ECOL6-AVIESENSAER	4.477701	0.9522	1.003233	2.376475	1.990419	1.3721	1.059952	1.574357	2.619547	1.3721	1.257368	2.212604
sp|P37330|MASZ_ECOLI-GEQVIAWVR	0.820258	1.8191	4.148786	0.728278	0.992991	2.27095	2.985997	1.168732	0.940975	1.0655	1.642092	0.859933
sp|P07014|SDHB_ECOLI-FIGPAGLLAAYR	1.288124	1.037002	1.299285	0.146054	1.167425	0.868465	1.299285	0.146054	1.547938	1.12355	1.337539	0.093752
sp|P33602|NUOG_ECOLI-EGGIYTPALR	0.158988	1.0958	0.922446	1.81921	0.156559	1.0958	0.91482	2.018361	0.361758	0.7582	2.507289	3.604086
sp|P69828|PTKA_ECOLI-SEVLTHIGNEMLAK	0.592906	0.8076	0.442433	0.611977	1.200122	0.8076	1.218335	0.820982	1.100518	0.8076	1.218335	1.727912
sp|A7ZSJ0|RL15_ECO24-GIGSGLGK	1.574929	0.59325	7.460589	2.521969	2.871904	0.2187	9.617402	1.638544	1.41128	0.7617	5.188611	1.585477
sp|P0AF93|RIDA_ECOLI-VGDIVK	1.68994	0.92725	2.16849	0.39805	1.006279	0.8987	1.548439	2.136293	1.000759	0.92725	0.593289	2.136293
sp|P36683|ACNB_ECOLI-MQPGITLR	0.735198	0.7291	1.081464	1.058931	1.006151	0.7616	1.10621	1.426355	1.006151	0.7042	1.061439	0.298414
sp|P0ADZ7|YAJC_ECOLI-GDEVLTNGGLVGR	0.988841	1.104776	0.497968	2.749767	1.030961	0.851319	0.411089	2.678652	0.390572	1.1526	0.724419	2.678652
sp|P0AEQ3|GLNH_ECOLI-AIDFSDGYYK	0.477147	0.65665	3.488465	1.382962	1.633961	1.12095	0.845497	2.650804	2.611719	0.78405	1.12977	1.854056
sp|A7ZPA8|YFBU_ECO24-LQTIIER	0.997637	1.93395	0.988787	0.665451	0.767254	1.9219	0.918244	0.50044	0.627436	1.9219	0.903994	0.166852
sp|A7ZSL4|EFTU1_ECO24-AGENVGVLLR	0.915184	1.624353	0.657417	1.686541	0.762557	1.4431	0.561945	2.285303	0.456495	1.0603	0.450732	2.868497

sp|A8A5E7|EFG_ECOHS-GYEFINDIK	0.320091	1.3507	1.466098	0.574547	0.669093	1.3507	1.413409	0.49431	0.795317	0.721	1.409084	0.644162
sp|P0A913|PAL_ECO57-GTPEYNISLGER	0.660586	0.6741	26.41056	1.112831	1.134228	0.3027	26.41056	1.249738	0.906797	0.71375	2.113118	1.128654
sp|A7ZV73|RS18_ECO24-FTAEGVQEIDYK	0.424039	0.3825	1.688316	0.314004	0.516401	0.3842	1.293801	0.314004	0.527756	0.7188	1.580248	0.201332
sp|P0C0L2|OSMC_ECOLI-SEVAVPGIDASTFDGIIQK	1.895223	2.91315	0.876758	0.56708	0.776319	2.8422	0.877896	0.576705	1.060746	2.35935	0.829617	0.441411
sp|A8A6H0|TNAA_ECOHS-FAENAYFIK	0.231897	0.7192	0.599283	1.043699	0.267366	0.6431	1.243339	1.043699	0.57927	0.53095	0.518534	1.2664
sp|B1IUY2|SYA_ECOLC-LSGDTLDGETAFR	1.30991	1.599311	1.612877	1.482775	1.713684	1.097	2.27348	1.590782	1.376793	0.8105	0.784254	1.761088
sp|A7ZNR4|GATZ_ECO24-SVELVK	1.726453	0.7865	0.035155	0.992271	2.031924	0.7865	0.226103	0.248425	2.052198	0.7865	0.570664	0.405502
sp|P0ABU5|ELBB_ECOLI-VLVLAE	0.445245	1.1786	0.938699	0.366112	0.546754	0.38035	1.309528	0.247145	0.405828	0.38035	0.938699	0.200939
sp|A1A7M1|BAMA_ECOK1-VNVDAGNR	0.741466	0.761011	1.133291	2.438249	0.755048	0.68069	1.0305	1.858017	0.719158	0.821033	1.244719	1.453032
sp|P0AEZ3|MIND_ECOLI-ILGILASK	1.439664	0.5277	0.88288	0.32163	2.059421	0.5277	0.851584	0.32163	1.800543	0.5235	1.066738	0.439993
sp|B7LA23|GLPK_ECO55-EMLPEVR	0.731445	1.81995	0.687826	2.307368	0.759958	0.82925	0.790357	1.655403	1.103489	0.82925	0.854837	1.931251
sp|P76251|DMLA_ECOLI-ENTEGEYSSLGGR	1.320912	0.8222	1.310892	0.627119	2.039024	0.7728	0.981217	0.923789	1.865112	0.956	0.939962	0.796937
sp|A1AGI5|RL17_ECOK1-LFNELGPR	0.745728	2.3022	0.631086	1.165415	1.010159	2.1336	0.864665	1.271407	0.730375	0.9681	0.930781	1.269007
sp|P62593|BLAT_ECOLX-DTTMPAAMATTLR	1.331245	1.5293	0.353257	0.340006	1.293088	1.37415	0.902099	0.727416	1.761085	1.4586	1.201141	0.732316
sp|A7ZV12|CH60_ECO24-NDAADLGAAGGMGGMGGMGGMM	1.453004	1.8102	0.930435	1.263269	1.410216	1.76195	0.877883	1.333908	1.445463	1.6137	0.869015	1.203002
sp|P0AE10|AHPC_ECO57-DASDLLR	0.355329	1.38315	2.115054	2.360692	0.857821	1.1039	3.304	1.994511	1.675442	0.7035	3.52	1.015684
sp|B7NF50|ATPA_ECOLU-GILDSFK	1.331725	0.5088	0.689755	1.362772	1.235294	0.4544	0.432474	1.418142	1.041157	0.5088	0.592668	2.555754
sp|P0A7W0|RS4_ECO57-LDNVVYR	0.255672	0.66185	0.716705	2.452682	0.201657	0.9996	1.104786	3.720117	0.210684	0.9996	1.015864	2.102414

sp|P0ACF1|DBHA_ECOL6-TQLIDVIAEK	0.04929	0.2859	0.646118	1.900477	1.141649	1.0627	0.867125	0.753262	1.191756	1.00495	0.687093	1.200603
sp|P0A9L3|FKBB_ECOLI-HPAVPVDVVHR	0.209468	0.712536	8.52163	0.511567	0.252607	0.7611	9.845859	0.82537	0.238783	0.7611	1.964588	0.644111
sp|B1LL63|ATPF_ECOSM-LVAEL	3.896611	0.3846	0.496031	4.061508	4.443448	0.213	1.33302	3.006114	3.896611	0.213	0.095291	2.738001
sp|P63285|CLPB_ECO57-AELEQAK	1.423552	1.09105	3.085021	1.800354	0.295519	0.3351	2.677765	1.933489	0.30728	0.55495	1.277126	1.194666
sp|P33599|NUOCD_ECOLI-EQLLEVGDFLK	1.754424	0.7642	1.86478	1.87035	1.74715	0.7714	1.692854	1.663295	1.130131	0.7278	1.69923	1.618334
sp|P25553|ALDA_ECOLI-IVDEIGLPR	0.402479	3.493693	1.563659	0.934624	0.243884	4.4297	8.439752	1.215943	0.386359	3.39255	8.439752	2.358408
sp|P06959|ODP2_ECOLI-AVAAALEQMPR	1.860369	2.4593	0.504875	3.733092	1.860369	2.4593	0.421995	3.677371	3.438551	1.70615	0.627941	1.699912
sp|P0AFG9|ODP1_ECO57-LVPIIADEAR	4.024331	0.91395	1.117016	0.189505	3.273726	0.8887	0.766933	0.26237	2.784289	0.8887	0.910922	0.26237
sp|P0AFG7|ODO2_ECO57-LLLDV	1.208319	0.5072	1.772232	0.292461	0.893768	0.5072	1.422091	0.170398	0.541797	0.6399	0.701384	0.619203
sp|P0AFG7|ODO2_ECO57-ESAPAAAAPAAQPALAAR	1.783362	0.9421	0.88718	1.320694	1.85647	1.07155	1.050225	1.433326	1.81737	1.0842	1.108033	1.361288
sp|P63285|CLPB_ECO57-LEVNEDR	1.845355	0.2002	0.231319	2.053834	1.38179	0.2078	0.231319	2.549571	1.339026	0.2154	0.651157	2.174795
sp|P0AG68|RS1_ECOL6-FTGVDR	1.597948	0.947916	0.396022	0.369026	1.426868	0.725992	0.521462	0.37727	1.426868	1.25478	0.519479	0.37727
sp|A7ZSD0|MDH_ECO24-AGVYDK	0.197517	1.1445	8.959847	0.879613	0.515354	1.1445	17.67328	0.837818	0.520505	0.6218	4.169199	0.5142
sp|B7M1N3|RL4_ECO8A-VVMTADAVK	0.558732	0.8391	0.783478	0.753917	2.001962	0.9469	3.125978	0.866613	1.674657	1.3395	2.9375	0.798583
sp|P15254|PUR4_ECOLI-GNNALGATALAQVYR	5.169847	1.583482	1.19341	0.69661	7.40592	2.1144	1.845867	0.757538	7.40592	2.1144	1.126537	0.770874
sp|B1IQV7|PNP_ECOLC-IAATDGEK	1.876768	1.05325	2.643476	1.719808	1.08439	1.05325	1.485376	0.52698	1.08439	1.1846	0.91173	1.17262
sp|P0A6Z5|HTPG_ECO57-FASTHTDSSAQTVSLEDYVSR	1.123795	0.8469	1.689398	0.867388	0.842063	0.9343	2.188073	0.76915	0.842063	0.9343	2.188073	0.845968
sp|P0AE10|AHPC_ECO57-EGEATLAPSLDLVGK	1.585187	1.00315	0.709849	1.479726	1.61092	1.1177	0.850946	0.717527	1.61636	1.0299	0.900037	0.755328
sp|P0A6Z5|HTPG_ECO57-SFLESLGSDQAK	0.747371	2.64315	0.600321	0.309593	1.257611	2.5504	0.760632	0.172296	1.453348	2.4969	0.788283	0.148157

sp|A7ZUM3|PUR9_ECO24-GSSMASDAFFPFR	0.792532	2.278	0.888751	2.544926	0.741795	2.278	0.585326	0.387659	0.831861	3.8199	0.863568	0.387659
sp|P0A3B2|TYPA_ECO27-VMDSNDLEK	0.756927	1.24135	1.120349	1.041002	0.625629	1.24135	1.120349	1.041002	0.434171	1.1719	1.120349	1.041002
sp|A8A6H0|TNAA_ECOHS-DDSFFDVYTECR	1.58625	0.685	0.758285	1.349223	1.47396	0.8843	0.223388	0.829524	1.515136	0.93685	0.223388	0.829524
sp|P23843|OPPA_ECOLI-DWVVNER	0.775985	0.852887	2.570978	35.36735	0.995894	1.1381	6.337162	8.394702	1.163375	0.91545	3.572832	6.620015
sp|A8A439|YGFZ_ECOHS-EGATTLLWFEHPAER	1.113473	1.421303	1.440268	2.832602	0.831551	0.9547	1.021372	2.351307	0.817481	1.4232	0.674513	3.061181
sp|P02925|RBSB_ECOLI-FNVLASQPADFDR	0.382709	0.42615	2.034258	2.110568	0.382709	0.42615	1.40428	2.862696	0.654021	0.65435	1.40428	2.043757
sp|P0AFG7|ODO2_ECO57-AVVEALK	2.44328	1.325186	0.550852	9.993421	1.200749	0.87795	0.355532	0.913533	0.436104	0.87795	0.371017	0.981774
sp|B7M1N4|RL3_ECO8A-GLWEFR	0.965443	2.5143	1.561988	1.24013	1.757146	2.5143	0.757698	1.043304	0.986639	0.70625	0.757698	1.218063
sp|A8A4Y4|IF2_ECOHS-TSLLDYIR	1.657787	3.656969	0.468726	5.20031	2.942619	5.16585	0.13684	6.064133	1.385754	5.16585	0.13684	4.112812
sp|P15288|PEPD_ECOLI-FLAGHAEELDLR	0.720314	2.6646	0.974976	5.786626	2.196934	1.59165	0.953944	0.915431	2.448801	0.98585	1.180253	1.166012
sp|A7ZJA8|SUCC_ECO24-LEGNNAELGAK	1.438208	1.3815	0.5	1.294747	2.137827	1.3815	0.616376	1.162036	1.931629	1.3815	1.289043	0.711209
sp|P0A8N4|SYK1_ECOL6-EQGIAFPNDFR	2.085229	0.7997	1.10592	1.527032	1.944608	0.7997	1.32801	1.55566	1.74773	0.7997	1.991623	1.615693
sp|A7ZJ31|SYL_ECO24-GEGDIDNAPWPVADEK	2.061599	0.4965	0.925974	1.474165	2.312555	1.1772	1.138511	0.995582	1.952818	1.8579	1.138511	1.173669
sp|B7MGS0|DPS_ECO45-YAIVANDVR	2.041906	0.709376	1.437295	0.196734	6.112652	0.928	1.411338	0.212556	4.441941	0.928	0.978292	0.212556
sp|P27302|TKT1_ECOLI-AYPQEAAEFTR	1.856872	0.88875	1.109076	0.462162	1.803241	0.85795	1.085505	0.403616	1.6777	0.85795	1.07107	0.403616
sp|A7ZV12|CH60_ECO24-VAQIR	1.334382	3.3907	0.802129	1.195968	0.74065	3.3907	0.695742	1.195968	1.557548	0.5501	0.343782	0.642693
sp|B5Z3U4|TIG_ECO5E-EKDGAVEAEDR	2.720464	1.443694	1.034943	0.850855	3.146017	0.940796	0.552981	1.198196	6.491188	1.0379	0.763196	2.493795
sp|P0A9C6|GLN1B_ECOL6-IPVVSSPK	0.63261	0.583981	0.411736	0.824345	0.59673	0.4689	1.084318	0.515546	0.739243	0.4689	0.539283	0.747158
sp|B7M1N3|RL4_ECO8A-FSVEAPK	0.724686	0.496063	0.266069	0.381893	0.898137	0.636638	0.321769	1.077768	1.355264	0.1741	0.324919	1.331337

sp|Q1R615|RL29_ECOUT-MQAASGQLQQSHLLK	0.912426	1.216	1.300337	0.432675	1.490707	0.9029	1.184521	0.627456	1.569563	0.7823	1.506243	0.481319
sp|P27550|ACSA_ECOLI-LVITSDEGVR	1.578825	0.86535	1.209493	0.535931	2.757804	0.86535	1.076807	0.897221	2.757804	0.86535	1.258757	0.766322
sp|P0AC70|GLRX4_ECOL6-GELQQLIK	5.114059	0.6086	31.56733	1.063986	7.222541	0.6086	31.56733	1.063986	6.368941	0.6086	0.349209	1.386545
sp|P0ADX2|YHFA_ECOL6-AVNITHSYEVVAA	1.98151	1.310233	1.069524	3.678485	2.084324	1.09265	1.781913	1.370046	0.730374	1.1922	1.547074	1.370046
sp|A1A7M9|ACCA_ECOK1-APLAAEAMGIIAPR	2.612527	0.57	0.589506	0.13849	1.959501	0.7505	0.940299	0.113541	1.049159	0.7505	0.630978	0.113541
sp|B7MZ75|ENO_ECO81-GIANSILIK	0.844634	0.2413	0.253435	0.246608	0.855682	0.2413	0.216047	0.255392	1.89373	0.26215	0.167086	0.432375
sp|A7ZPU2|PUR5_ECO24-DAGVDIDAGNALVGR	0.593854	0.699392	0.18512	17.44209	1.835165	0.7566	0.475426	14.96837	1.21875	0.74075	0.755141	8.229385
sp|P63285|CLPB_ECO57-LDPVIGR	0.722404	1.39835	2.151756	0.422527	1.139146	1.5982	2.236802	0.422527	1.227926	1.5982	1.05809	0.587425
sp|A7ZSJ0|RL15_ECO24-AAITAEVR	0.362511	1.199414	0.914247	1.308185	0.684317	0.53655	0.712701	1.442977	0.7722	0.6341	0.572485	1.520097
sp|B1LL63|ATPF_ECOSM-SQILDEAK	0.526784	1.0393	2.433905	0.858057	0.396921	1.1641	1.815862	0.736567	1.028551	1.2983	1.415161	0.453401
sp|P77395|CNOX_ECOLI-TIPLQDQDTR	3.08038	1.6543	0.655055	1.708742	2.46455	1.6208	0.820878	1.833606	2.529116	1.6035	0.940323	1.697979
sp|Q0TCG3|RS13_ECOL5-AILAAAGIAEDVK	0.313722	0.457209	6.045341	0.289157	0.315459	0.57945	12.03392	0.090406	0.301053	0.3822	1.93293	0.356363
sp|A7ZUH8|ARLY_ECO24-NPDALELIR	1.221567	0.4031	5.426805	0.127112	1.14266	0.4031	5.426805	0.158094	1.696721	0.5318	3.702023	0.255604
sp|P0ABH7|CISY_ECOLI-GTLGQDVIDIR	1.887025	3.02965	1.374396	1.359557	1.420267	1.5513	2.532627	1.810412	1.628784	1.5513	2.004012	1.76366
sp|A7ZUJ6|RL11_ECO24-AADMTGADIEAMTR	1.226922	1.4558	2.79349	1.568591	1.653571	1.0205	2.79349	1.546874	1.412759	0.9455	1.518309	1.034285
sp|Q0TCG3|RS13_ECOL5-ISELSEGQIDTLR	1.378165	0.8266	0.558031	1.213646	1.209403	1.6102	0.434027	0.295297	1.090718	1.6102	0.434027	0.855794
sp|B1IT06|RS6_ECOLC-YTAAITGAEGK	0.387382	1.4535	1.770075	0.766568	0.637236	1.4033	1.770075	0.797601	0.733518	1.5023	1.775939	0.604507
sp|P25553|ALDA_ECOLI-AIDAAER	0.964294	1.48395	0.707085	2.344117	1.232062	1.407216	0.836117	1.958784	3.278726	1.8822	1.080723	1.958784
sp|C4ZPU9|RS20_ECOBW-GLIHK	0.949583	0.37015	0.527637	7.561563	1.386078	0.5161	0.26583	6.914546	1.384189	0.5161	0.475246	3.455181

sp|K0BE10|TAL_ECO1E-LSYTGEVK	0.246266	1.061205	1.990943	1.067775	0.331238	0.90797	2.356114	0.782129	0.268281	0.955401	0.948616	0.972595
sp|P0AFG7|ODO2_ECO57-QYGEAFEK	1.069933	1.5967	4.247405	0.743153	1.145354	1.1304	3.610171	0.696959	2.033631	1.10495	3.139199	0.770015
sp|A7ZJZ6|SERC_ECO24-VTVDGLR	0.912178	0.514526	1.856295	0.380986	0.923662	0.1616	1.30943	0.410186	1.070971	0.6352	1.554745	0.372338
sp|B7NF50|ATPA_ECOLU-TALAIDAIINQR	2.082428	3.2971	1.734078	15.57228	1.376744	3.0509	1.514	3.528728	1.144732	2.9793	3.587868	3.64916
sp|A7ZUD3|TPIS_ECO24-ADAFAVIVK	1.511746	0.27425	3.688343	4.136967	1.511746	0.2824	0.591604	3.141764	3.95775	0.2824	0.543447	1.696979
sp|A7ZTU5|ATPG_ECO24-VMLQAYDEGR	0.784834	0.2349	2.164054	0.125093	1.272275	0.8036	2.057648	0.355028	0.907577	1.0977	1.608612	0.659527
sp|P08200|IDH_ECOLI-VVDAAVEK	0.539652	0.5674	2.372255	0.647866	1.752334	0.43645	3.832305	1.187119	1.402353	0.50715	4.971329	1.286136
sp|A7ZUD3|TPIS_ECO24-SATPAQAQAVHK	0.633905	0.3804	0.953438	0.582957	0.966992	0.63495	0.869802	0.61658	0.656905	0.8046	0.700336	0.599769
sp|B7M1N3|RL4_ECO8A-QVEEMLA	2.621032	1.1222	3.864462	1.790433	1.386014	1.1222	1.300149	1.790433	0.704376	0.8714	1.380111	1.350413
sp|P04825|AMPN_ECOLI-GLNIFNSK	1.019133	1.3647	0.795755	0.115695	1.028274	1.4109	0.657268	0.115695	0.868778	1.46295	1.054039	0.434504
sp|P0AEQ3|GLNH_ECOLI-WFGTEPK	2.001295	0.71095	12.1467	0.607568	1.591524	0.9484	1.154329	0.758322	1.355888	1.2407	1.372673	0.783974
sp|P0AAI6|FABF_ECOL6-ASTPLGVGGFGAAR	1.32841	1.5792	0.056673	2.059613	1.469128	1.5792	0.056673	1.779492	1.392844	1.18825	1.99184	1.408767
sp|P0A9R0|DHAS_ECO57-GQAETNK	2.614543	0.6378	0.146222	5.480703	2.636595	0.65625	0.339971	1.518908	3.825927	0.6378	0.489012	1.747472
sp|P68206|YJBJ_ECOLI-EVVDWETR	1.706338	0.8577	0.208053	4.636827	0.854233	0.8608	0.290174	2.021334	0.955042	0.8639	0.290174	3.102208
sp|P63285|CLPB_ECO57-MMESER	0.630935	1.146651	0.788271	1.761023	0.551282	1.170327	1.004241	3.012591	0.887485	1.2892	1.473874	1.095888
sp|P0A6Y9|DNAK_ECOL6-FEELVQTR	0.688413	1.48085	1.477304	0.210233	0.704161	2.2544	1.181728	4.481823	0.704161	2.2544	1.181728	4.649434
sp|B7NF50|ATPA_ECOLU-AVDSMIPIGR	0.419311	2.113129	1.127995	2.745342	0.682249	2.4919	0.878258	2.895341	0.962167	2.41515	0.836686	1.745045
sp|Q1R6A9|RL13_ECOUT-VYAGNEHNHAAQQPQVLDI	1.485529	0.9605	0.879989	0.784016	0.917443	0.9308	0.803697	0.822573	0.826754	0.9308	1.000332	0.932961
sp|P0A9A0|FTNA_ECO57-SGEGLYFIDK	1.104006	1.118996	1.136679	1.089377	0.839914	0.881684	1.136679	0.179306	0.964504	0.8788	0.95574	0.764903

sp|B7UIL4|RS2_ECO27-ILFVGTK	0.057067	0.5874	1.711879	1.131247	0.548373	0.6895	1.228779	0.557455	0.36176	0.6895	0.806712	0.55085
sp|B7NF50|ATPA_ECOLU-EAFPGDVFYLHSR	0.299732	0.3791	0.219106	0.729444	0.314585	0.39965	0.574418	0.550248	0.267738	0.39965	0.577334	0.871325
sp|P10384|FADL_ECOLI-AYSGEGAIADDAGNVSR	0.344487	0.934	0.46887	1.379125	0.344487	0.934	0.613071	3.628054	0.714851	0.934	0.693266	1.208044
sp|P00968|CARB_ECOLI-IGLETAR	1.234202	0.749875	12.87325	3.093226	1.855522	0.935173	13.18962	2.07535	0.691571	1.068889	13.18962	2.189855
sp|A7ZTU4|ATPB_ECO24-VSLVYGQMNEPPGNR	1.815311	2.539104	0.877246	1.681552	1.179536	4.9409	0.512972	1.261388	0.549418	1.9272	1.582272	1.118985
sp|B7NF50|ATPA_ECOLU-MQLNSTEISELIK	1.91229	0.9617	4.368895	0.536154	2.857283	1.8247	3.413197	0.428029	2.058478	1.8247	1.379273	0.612095
sp|B5Z0E9|EFTS_ECO5E-ITDVEVLK	1.015204	0.6758	1.380501	0.673029	0.933073	0.8634	1.263093	0.673288	0.866458	0.83295	1.545128	0.685339
sp|P0A9S3|GATD_ECOLI-VAESVIPEIK	2.455262	0.63585	0.65956	0.253859	3.592081	0.5734	0.65956	0.286782	3.711945	1.0201	0.694807	1.431452
sp|P0AA06|PTHP_ECO57-AVEHLVK	1.026693	0.4664	10.93086	2.401888	7.953136	0.4664	6.158249	1.208191	1.05833	0.5955	2.052452	1.013156
sp|P0AE10|AHPC_ECO57-AWHSSSETIAK	2.402305	1.1007	0.5844	0.628794	1.746581	1.31045	0.497821	0.919002	1.704076	1.1007	0.565535	0.722284
sp|B7MGS0|DPS_ECO45-TALIDHLDTMAER	1.303987	1.27465	1.165137	9.505668	1.265532	1.27465	1.059419	1.957849	1.342443	1.3109	1.143355	2.063433
sp|P0A3B2|TYPA_ECO27-ELVHNVALR	1.434744	1.343521	0.860397	0.279867	1.29857	0.879443	1.617733	0.265951	1.256394	0.906986	1.200846	0.229196
sp|B7MIX0|RL1_ECO45-ELATAK	2.311461	0.60225	0.984365	1.46778	1.534933	0.60225	1.186464	2.494046	0.555093	0.4619	0.850616	2.809073
sp|B1LNK7|GLYA_ECOSM-TYQQQVAK	0.506162	1.0979	1.376137	0.190428	0.556994	1.01895	0.989422	0.179317	0.319497	1.01895	3.059562	0.454829
sp|P15288|PEPD_ECOLI-DPIQPYIDGEWVK	0.937577	0.6989	6.043105	0.398012	1.108378	0.8296	8.893487	0.606883	1.138114	0.95625	5.034209	0.648701
sp|B7MIU7|RS16_ECO45-MVTIR	0.401977	1.380101	0.567225	0.222455	0.401977	1.23355	0.592752	0.223326	0.469694	1.8775	0.36006	0.367152
sp|P0A956|ALKH_ECOL6-EAVEGAK	2.761077	3.5823	0.495074	2.066221	1.571128	1.3595	0.745056	0.644744	1.779564	0.9894	0.577456	0.6842
sp|P37330|MASZ_ECOLI-VPDIHNVALMEDR	0.669841	0.76383	0.457475	3.007561	0.6783	0.9368	0.634841	2.221352	0.832575	0.9368	0.759367	3.221588
sp|B7MIX0|RL1_ECO45-VVGQLGQVLGPR	0.462315	1.31805	0.767479	1.327969	0.486826	1.6485	0.438184	0.621132	0.388314	1.31805	0.447186	0.730647

sp|B5Z3U4|TIG_ECO5E-MIPGFEDGIK	5.026076	1.0106	0.632756	2.636516	0.339605	1.0106	1.385399	2.500822	0.370522	0.86535	0.9269	1.922956
sp|B7UK34|RL14_ECO27-IFGPVTR	1.371797	0.950232	0.352289	0.426098	2.981643	0.9138	0.263091	0.350876	2.981643	0.9138	0.247876	0.455662
sp|B5Z0E9|EFTS_ECO5E-VAALEGDVLGSYQHGAR	6.459084	1.3348	0.33583	1.519364	5.673577	1.3428	0.385672	1.519364	3.217105	1.3348	0.454478	0.983776
sp|P0ABH7|CISY_ECOLI-EIAAFR	0.457347	0.522563	0.60931	6.140919	0.351354	0.609691	0.290913	4.017976	0.464021	0.4447	0.725494	2.806498
sp|B7UIL4|RS2_ECO27-DAALSCDQFFVNHR	0.921294	0.7133	0.780887	0.245526	0.979592	2.3594	0.841895	0.208696	0.69234	3.0162	0.814295	0.288563
sp|P0A7L8|RL27_ECOLI-FISIEAE	1.099093	1.415734	0.559292	1.377351	1.166769	1.228712	0.558452	1.319608	0.817597	1.4684	0.393712	1.377351
sp|P0A9A7|FTSZ_ECOL6-GLGAGANPEVGR	0.611561	0.718516	0.686301	1.575122	0.841074	0.724065	0.686301	1.575122	1.066118	0.707811	0.686301	1.575122
sp|P0A8N6|SYK2_ECO57-GANEAIDFNDELR	1.415854	3.57755	1.557711	1.087502	1.252073	1.0704	1.164903	0.53876	0.765454	1.0704	1.380255	1.373992
sp|P0A9L3|FKBB_ECOLI-EGVNSTESGLQFR	0.955062	1.5783	1.13172	0.587579	0.566623	1.5783	1.13172	0.587579	0.82257	1.82265	1.134482	0.894204
sp|P0ACF4|DBHB_ECOLI-SQLIDK	1.153608	0.6402	2.96423	1.712981	1.734866	0.6402	1.213518	1.400308	1.738878	0.64915	1.795574	0.769942
sp|P0A6G1|CH10_ECO57-VGDIVIFNDGYGVK	0.874682	0.46225	0.71043	0.548118	0.761008	0.514	0.706162	0.294994	0.880012	0.6072	0.846954	0.211851
sp|A1AGI6|RPOA_ECOK1-LVDIEQVSSTHAK	0.626213	0.962149	1.192947	2.544965	1.70173	0.7033	0.96382	0.648371	1.317877	0.7546	0.96382	0.974182
sp|B1IQV7|PNP_ECOLC-VGYINDQYVLNPTQDELK	3.558824	1.8671	1.727145	1.050722	2.458534	1.0544	1.88203	0.365953	1.747473	1.58075	1.562386	0.50957
sp|P06959|ODP2_ECOLI-VNVGDK	0.248174	0.1995	0.700141	1.038932	0.292605	1.04885	0.630872	1.038932	0.709045	0.24965	0.752202	1.038932
sp|B7LA23|GLPK_ECO55-LINDAYDSEYFATK	3.150395	0.6262	1.026068	0.877606	1.859166	0.53365	0.857132	0.672657	1.730985	0.5225	0.799021	0.562627
sp|P0AFH9|OSMY_ECOL6-AALVDHDNIK	0.754	0.8308	2.081798	1.302172	1.856889	0.3947	2.368249	1.163781	1.488586	0.6621	1.146782	1.916584
sp|B7M1N4|RL3_ECO8A-GAVPGATGSDLIVKPAVK	0.508584	1.1302	0.97358	4.03516	0.715306	0.84525	2.908955	0.705887	0.952906	0.8038	1.984643	0.842065
sp|B7UHB4|CSRA_ECO27-EEIYQR	1.154269	0.4247	0.656148	1.74047	1.186044	0.4247	1.624513	0.789185	1.151608	0.41855	1.315739	2.439117
sp|B7MRB2|RL7_ECO81-AAGANK	1.495303	2.0537	1.140624	0.282028	2.050347	1.2481	1.595309	0.175163	1.526681	1.2481	1.776953	0.268006

sp|A7ZV12|CH60_ECO24-NVVLDK	0.363693	1.1279	0.509339	1.52596	0.495976	0.59885	0.624519	1.52596	0.359058	0.5686	0.642486	1.667977
sp|P0ACA3|SSPA_ECOLI-FPHPPLMPVYPVAR	0.784726	1.1296	0.702122	4.769697	0.772858	1.09	0.796605	5.168171	0.802854	1.0035	0.791785	5.211292
sp|A7ZSL4|EFTU1_ECO24-MVVTLIHPIAMDDGLR	0.997616	0.89885	0.790049	1.331913	0.604707	1.0035	0.8601	1.129005	0.66783	0.6441	0.821982	0.977689
sp|P0A7D6|PURA_ECO57-LDVLDGLK	0.155063	4.5948	0.4063	2.575964	0.418825	2.58505	0.9199	1.378781	0.419519	0.57375	1.118401	1.489549
sp|B1XFM6|CLPX_ECODH-GIVYIDEIDK	0.5436	5.5498	1.687127	1.128627	0.53367	5.5498	2.859232	0.820716	1.242897	3.1226	0.773977	0.973761
sp|A1A7M1|BAMA_ECOK1-LAGDLETLR	0.728599	0.775674	0.422779	0.904871	0.798966	0.3885	0.504839	2.055528	0.228542	1.0271	0.587716	0.980631
sp|A7ZNR4|GATZ_ECO24-GLTEALTR	13.42261	0.932341	0.876369	0.972632	2.865232	0.8646	0.668923	0.918916	0.579008	0.8646	1.891011	0.918916
sp|B7N1C2|RS7_ECO81-FGSELLAK	1.430065	0.4363	2.526912	0.748025	0.829984	1.86695	2.132271	0.921121	1.235094	1.83595	1.631474	0.884467
sp|A7ZIN4|KAD_ECO24-DIMDAGK	0.336106	0.724	0.215883	0.232998	0.716739	0.71835	0.320774	0.712114	1.181182	1.1793	0.618033	0.846706
sp|A1AF92|GCSP_ECOK1-QGADIVFGSAQR	3.401616	0.8037	1.131414	0.267302	4.745328	0.8037	0.855309	0.267302	3.228139	0.8037	0.740993	0.120058
sp|P60624|RL24_ECOLI-VIVEGINLVK	1.514382	0.8933	13.83185	0.262257	1.514382	0.8286	0.816581	0.839827	1.74082	0.9721	0.489564	0.499567
sp|A7ZSL4|EFTU1_ECO24-FESEVYILSK	1.098223	3.5114	0.564862	0.814107	1.240227	2.0483	0.299639	0.750099	1.123441	2.4835	0.710719	0.752483
sp|B5Z3U4|TIG_ECO5E-DGAVEAEDR	1.919666	1.012977	1.667309	0.928009	2.682688	1.0005	1.222298	0.928009	2.458087	1.0005	1.373533	3.330229
sp|A7ZSJ0|RL15_ECO24-LNTLSPAEGSK	0.51394	1.2236	0.801233	1.847336	0.569426	1.3625	0.601439	1.449551	0.834362	1.3625	0.823672	1.130321
sp|P0A807|RRF_ECO57-QLASVTVEDSR	1.954881	0.58915	3.66054	2.037527	1.511173	0.8611	8.337093	2.545288	1.596132	0.8445	3.218052	1.558243
sp|P62593|BLAT_ECOLX-WEPELNEAIPNDER	0.565422	1.1663	0.335349	0.719477	2.899459	1.1842	0.796278	0.794801	1.951156	1.17525	0.955633	1.312392
sp|A8A466|PGK_ECOHS-VLPAVAMLEER	0.883202	0.7949	0.211339	0.237812	0.908162	0.8017	0.225596	0.160942	1.098147	0.8182	0.655233	0.160942
sp|P00968|CARB_ECOLI-ALEAAGVPVIGTSPDAIDR	0.881051	2.6497	3.629086	1.115677	0.71929	1.1063	2.577699	1.288576	0.736792	1.3874	2.501186	1.278836
sp|A7ZV12|CH60_ECO24-VAAVK	5.705206	1.00375	0.099659	7.183613	4.877303	0.2999	0.348214	5.939508	1.175936	0.39255	0.663208	6.177568

sp|P0A9C6|GLN1B_ECOL6-EQHVTIPAHQVNAEFFEEGK	1.002035	0.8163	0.597672	0.815465	0.732757	0.8509	0.626583	2.353509	1.411556	0.8163	0.700137	3.201759
sp|Q1R626|RL18_ECOUT-LQELGATR	0.677669	0.6886	0.272155	1.416808	0.839253	0.6886	0.64771	1.101634	2.768281	0.83405	1.133409	1.101634
sp|P62593|BLAT_ECOLX-GIIAALGPDGKPSR	0.614111	0.59875	0.702833	0.529	1.166176	0.5422	0.592946	0.427758	1.172434	0.68765	0.920497	0.480452
sp|P0ADZ2|RL23_ECO57-ASTAMEK	1.971007	1.749978	2.229107	2.048553	1.862523	2.366123	0.409983	1.295297	2.187688	2.29485	0.982874	1.867102
sp|A1A9S2|EFEO_ECOK1-GVLGLD	1.031813	0.593207	5.04088	10.6913	2.641926	0.1184	3.905788	12.34069	1.918537	0.1184	3.610202	12.34069
sp|A1AID4|CAPP_ECOK1-DGNPNVTADITR	0.529322	2.0949	0.382494	1.02119	1.135982	1.5925	0.35801	0.838597	1.003922	1.4106	0.570394	0.995209
sp|A7ZUM3|PUR9_ECO24-ELDAETAQAIISR	0.744171	1.78645	1.782461	1.900984	1.803827	1.5229	0.719637	0.490725	1.534276	1.4288	0.753299	0.37203
sp|A7ZTP1|IBPA_ECO24-GAHADEQK	2.555934	0.9093	1.118928	0.593242	2.891914	0.9093	1.326809	0.692405	2.792282	1.3529	1.255199	0.767161
sp|A8A439|YGFZ_ECOHS-DGDGFAWIER	4.59567	0.65665	1.63885	1.607437	4.974156	0.8057	1.63885	2.199564	3.016023	0.8057	1.155434	1.715313
sp|B1IQV7|PNP_ECOLC-DGISALQMDIK	0.491108	0.98805	0.192201	1.038673	0.658691	0.99855	0.206726	0.30336	1.349618	0.99855	0.122496	0.274259
sp|P0ADZ7|YAJC_ECOLI-LMDSIAK	0.571012	1.015691	4.798165	1.457346	0.431624	1.34185	8.014934	1.804122	0.460031	1.1644	1.604646	0.853249
sp|P0ABQ2|GARR_ECOLI-GGLAGSTVLDAK	1.878487	3.11685	5.236904	0.115677	3.190047	2.5444	2.889601	2.718395	1.987926	2.5444	2.889601	4.710359
sp|A7ZIN4|KAD_ECO24-EAEAGNTK	3.855743	0.6618	1.375271	1.655814	4.49146	0.69455	1.386533	1.332049	2.956888	0.8698	1.569574	1.123138
sp|P33602|NUOG_ECOLI-FQDEVGGK	1.133315	5.65745	1.463348	0.726158	2.277544	1.21835	1.980255	0.9051	1.657004	1.21835	2.295416	0.644437
sp|P0AA27|THIO_ECO57-EFLDANLA	1.958174	1.5687	0.565726	3.419483	1.348631	1.4354	0.631511	2.665782	1.863422	1.1614	0.589404	1.959264
sp|P0AFG9|ODP1_ECO57-GFLIGGTSGR	1.313066	0.8624	0.599376	3.153555	1.152908	2.158	0.589207	3.192871	0.961721	1.7653	0.750098	0.927012
sp|P0A910|OMPA_ECOLI-GSVENGAYK	3.368398	1.72825	1.338911	0.879429	1.664255	1.72825	1.367415	0.842399	1.582947	1.8038	1.411083	0.998781
sp|P23843|OPPA_ECOLI-SPAFDSIMAETLK	1.605	0.6767	0.788923	1.071205	1.4993	0.8632	0.894074	0.655874	1.191068	0.8632	1.071241	0.731614
sp|B5Z3U4|TIG_ECO5E-IDGFR	0.306752	0.616943	0.264136	1.445849	0.388748	0.5066	0.203032	0.864119	0.130012	0.5066	0.203032	1.123111

sp|A7ZNT3|SYM_ECO24-SAYPDPQALIGR	0.924031	0.3288	0.962863	0.779622	0.788505	1.2887	0.30077	0.840958	0.660658	1.2887	0.359915	0.861302
sp|P0AGG9|TLDD_ECOL6-DGSYNIDQGVGVR	0.638523	1.012702	1	3.070836	0.474733	0.889749	0.565353	3.070836	0.906963	0.4902	0.565353	3.070836
sp|A7ZJZ6|SERC_ECO24-EFIQVAEEAEK	0.990483	0.7376	1.727633	1.577105	1.237748	1.1243	1.580299	3.208901	1.46291	0.9453	1.580299	1.400391
sp|B5Z2K8|RL9_ECO5E-LFGSIGTR	0.178109	1.7195	0.4444	3.177561	0.600075	1.7195	0.767309	2.065284	1.066174	1.16395	0.49076	1.887981
sp|P0AGD5|SODF_ECO57-SLEEIIR	0.618028	1.499708	1.216056	1.106947	0.60711	1.4711	1.1667	1.032125	0.48212	1.4563	0.935605	1.801043
sp|P69778|LPP_ECO57-SDVQAAK	1.506934	0.80705	0.406019	2.770759	2.233608	0.93855	0.767254	3.255492	2.189497	0.8154	0.767254	2.855489
sp|P69784|PTGA_ECOL6-LSGSVTVGETPVIR	4.195414	1.1592	0.661693	1.178944	3.447839	1.1626	0.416559	0.598899	2.795105	0.91805	0.419625	0.615858
sp|P0A6Y9|DNAK_ECOL6-AAIEAK	3.854582	0.8853	0.539654	0.279475	2.063778	0.1662	0.419567	0.29403	1.840667	0.52575	0.571297	0.195506
sp|B5Z3U4|TIG_ECO5E-FGVEDGSVEGLR	2.036618	1.8623	0.843106	1.402248	1.331673	1.3102	1.626991	1.328549	1.266296	1.3102	0.884226	1.339869
sp|A8A439|YGFZ_ECOHS-VTIAPDDER	1.853974	1.01835	0.528797	0.710582	2.563482	1.5827	0.601954	0.652384	2.563482	1.376	0.741864	0.652043
sp|B7LA26|RRAA_ECO55-VLVVDGGGSVR	2.529225	0.4431	1.239055	0.180994	1.777795	0.58105	2.397727	0.41954	1.87318	0.60515	1.878497	1.357245
sp|C4ZZ44|ILVC_ECOBW-DEFADGASYLQGK	1.159446	1.302163	0.111989	0.969811	1.094394	2.0546	0.095715	0.926139	0.822659	2.0546	0.244041	0.68392
sp|P00509|AAT_ECOLI-VAADFLAK	1.113202	0.4561	0.337535	1.40705	1.292011	0.4046	0.179471	1.348451	1.220405	0.4046	0.722286	1.634849
sp|P0AGF0|SUCD_ECOL6-SGTLTYEAVK	1.085804	1.5873	1.032264	0.59132	1.457802	0.64	1.130943	0.958554	1.496472	0.76235	0.823558	1.989551
sp|B7L6J2|SYT_ECO55-EYQYQEVK	0.707384	0.4125	0.3642	1.623996	0.915741	1.038	1.03339	2.074357	1.001952	0.9592	1.227739	1.531132
sp|B7MRB2|RL7_ECO81-TEFDVILK	3.459048	0.3088	1.431254	0.993905	3.459048	0.5564	2.111915	0.925218	1.129268	0.5675	1.875276	0.855036
sp|P0AC41|SDHA_ECOLI-IYQSTTNAHINTGDGVGMAIR	0.814246	0.598001	0.576896	0.612528	1.030056	0.705263	0.66564	0.850121	0.792402	0.5827	1.075348	0.762653
sp|A7ZJD0|GPMA_ECO24-AAAVANQGK	1.658376	1.8809	0.755806	1.724954	1.17195	1.18605	1.470599	2.080114	1.146633	0.8662	1.034235	0.896513
sp|P0A6Y9|DNAK_ECOL6-MAPPQISAEVLK	0.350957	0.6763	6.520517	4.180004	0.540576	0.7342	5.613483	2.013324	0.870511	0.7376	1.464078	1.136036

sp|P0ACF4|DBHB_ECOLI-EITIAAAK	4.916655	0.4283	1.000501	1.051319	2.828321	1.1194	0.916654	1.070422	2.03623	0.88615	1.253599	1.552136
sp|P0AE10|AHPC_ECO57-EDEGLADR	2.541194	1.6855	1.078194	5.030723	2.389499	1.5655	0.795232	2.85251	2.378381	1.978	0.675123	2.472281
sp|A7ZTP1|IBPA_ECO24-NFDLSPLYR	0.836668	1.1469	0.879927	0.983079	0.753076	1.1153	1.103927	0.645612	0.811208	1.1035	1.11173	0.573101
sp|P0A8N4|SYK1_ECOL6-ASFVTLQDVGGR	0.640279	2.0133	1.141178	1.022934	0.738294	1.3971	0.907505	0.883836	0.670604	1.2109	0.933842	0.838566
sp|A1A7K0|GSA_ECOK1-AFTGVGGTPLFIEK	1.170737	1.2233	0.732819	1.78814	0.832288	1.1247	0.462769	0.716527	1.017836	1.1247	0.390361	1.402964
sp|A8A750|KATG_ECOHS-LALMPQR	1.666609	3.1952	1.239387	2.161329	3.439928	1.0782	1.603579	1.672853	4.035552	1.0872	2.268663	1.519933
sp|P0ACF4|DBHB_ECOLI-NPQTGK	2.260256	0.6398	1.729743	0.582428	3.360532	0.70665	1.127366	1.018394	2.169399	0.7735	0.95624	1.838352
sp|P38489|NFSB_ECOLI-FFADMHR	1.030136	0.803519	0.900146	0.61882	0.500328	0.861697	1.062031	0.31503	0.666878	0.79154	1.263354	0.446931
sp|P0A6Z5|HTPG_ECO57-GLIDSSDLPLNVSR	1.124912	3.039	0.729056	2.339445	1.366252	0.7401	0.914888	2.350724	1.24256	0.8671	0.805595	2.350724
sp|P00490|PHSM_ECOLI-FNDGDFLR	0.803024	1.3283	0.542648	1.658394	0.869213	1.3283	0.542648	0.899912	0.900881	1.3283	0.782305	1.350234
sp|P0A7W3|RS5_ECO57-QAGELQEK	0.884014	0.9964	1.411683	0.860249	1.237507	0.9964	1.564626	0.790137	1.062428	0.6926	2.0181	0.617268
sp|P0A6Y9|DNAK_ECOL6-MQELAQVSQK	0.296163	0.5935	1.668925	0.841328	0.357712	0.8391	1.184069	0.766244	0.290311	1.1709	0.996156	0.766313
sp|A7ZJA8|SUCC_ECO24-IILSDDK	1.007123	2.0729	0.614341	1.035448	0.599738	1.5148	0.728877	0.860679	0.743689	1.5678	1.019962	0.778473
sp|P0AD62|KPYK1_ECO57-EITSTDDFYR	3.788606	0.3845	0.622524	2.232894	3.193509	0.3845	0.767526	2.780801	2.069209	0.69	0.532631	1.900125
sp|A7ZJA8|SUCC_ECO24-LADSGLNIIAAK	0.535646	2.7355	1.120768	0.496772	0.573585	0.777	0.816423	0.496772	0.629338	0.5597	0.683001	0.435803
sp|P76558|MAO2_ECOLI-GVTQEQAQR	0.616797	3.9073	0.68386	0.241812	0.820733	3.9073	0.68386	0.271132	1.111165	3.9073	0.373262	0.322043
sp|A1A9S2|EFEO_ECOK1-GVMVVEER	0.871949	2.4506	1.482782	1.007401	0.691885	1.82975	1.431285	3.439599	1.269716	1.59465	1.371697	0.693797
sp|P0A7D6|PURA_ECO57-AEAVDYQK	1.619926	1.37404	0.266226	8.076039	1.619926	2.3658	0.142347	8.577674	1.082169	1.37525	0.239766	3.102871
sp|P0A6Y9|DNAK_ECOL6-QAVTNPQNTLFAIK	0.962756	0.774	0.951542	0.457977	1.278717	0.774	0.415892	0.295214	1.37716	0.868	0.504405	0.356641

sp|P0AFG9|ODP1_ECO57-WNMLHPLETPR	0.619852	1.064893	1.454736	1.356308	0.685736	0.88355	0.93882	2.368582	1.005241	0.8435	0.977668	1.618169
sp|C4ZRQ8|DAPD_ECOBW-ETGEIHYGR	1.722619	1.2894	0.472446	1.066969	1.169484	1.2894	0.404323	0.845887	1.169484	1.2894	0.404323	0.845887
sp|A8A750|KATG_ECOHS-VMNLDR	0.418326	0.749243	1.350704	1.597543	0.752798	0.731651	1.350704	1.140349	0.84427	0.852	1.346154	0.842532
sp|B5Z0E9|EFTS_ECO5E-VLDAAVAGK	0.928607	1.2282	1.651421	1.734175	0.784343	1.2282	0.543471	1.458953	0.795155	1.2021	1.195225	1.302831
sp|P17169|GLMS_ECOLI-GTDVDQPR	1.645611	1.025678	0.779943	2.788246	1.836204	0.877895	0.586449	3.664512	1.836204	0.902894	0.586449	3.664512
sp|A7ZUM3|PUR9_ECO24-EMDDNEGSLTLATR	0.644482	0.7822	1.326719	1.289361	0.644482	0.9405	1.37509	0.796632	0.806664	0.7822	1.37509	1.142924
sp|B7LA23|GLPK_ECO55-WILDHVEGSR	3.285414	0.2273	3.385495	4.110486	5.495556	0.2316	2.984214	1.006108	5.495556	0.2316	2.669641	1.09398
sp|B5Z2K8|RL9_ECO5E-INALETVTIASK	0.814439	1.7392	0.344587	0.471369	0.257562	2.4156	1.197906	0.433758	0.673032	0.9308	0.914878	0.170764
sp|P07014|SDHB_ECOLI-YNPDVDDAPR	1.091852	1.3785	0.491443	2.248394	1.356036	1.3785	0.625546	2.138723	1.8398	2.29645	0.662799	1.950897
sp|P0A6Y9|DNAK_ECOL6-LESLVEDLVNR	1.819046	0.775706	1.007636	0.147401	1.878236	0.197	0.573194	0.107761	0.704639	0.197	1.128057	0.107761
sp|P0A9P2|DLDH_ECO57-FTGANTLEVEGENGK	2.027985	1.7526	0.41779	0.081307	2.274683	1.2955	0.41779	0.328885	3.092785	1.2955	0.41779	0.328885
sp|A7ZUM3|PUR9_ECO24-AADEGLEVK	4.681531	1.11815	1.340801	1.835511	6.881058	1.11815	1.340801	1.842172	2.100153	1.2904	2.048767	2.474168
sp|P09546|PUTA_ECOLI-AAITAAYR	0.817738	2.0169	2.584139	12.36236	0.60082	2.0169	2.573344	12.36236	0.524948	2.0169	4.029965	3.383734
sp|A7ZV12|CH60_ECO24-AVAAGMNPMDLK	0.29263	3.6123	0.935553	0.440228	0.999683	1.1744	0.832934	0.465903	0.943574	1.1601	1.206288	0.451938
sp|P0A7V4|RS3_ECOL6-LVADSITSQLER	1.598045	0.668	1.936741	0.688859	1.715533	0.668	1.936741	1.119227	2.533442	0.5143	0.507452	0.566959
sp|P0A910|OMPA_ECOLI-RVEIEVK	0.413585	1.343432	2.255431	1.163684	0.608861	0.8919	3.409537	1.163684	0.680809	0.84295	2.064138	1.679791
sp|P0ACG0|HNS_ECO57-REEESAAAAEVEER	0.60881	0.3445	0.741893	4.97434	0.876508	0.613	1.295079	2.278174	0.768407	0.62555	1.177635	3.026933
sp|A7ZHT6|SYP_ECO24-VVAAAIEQNYDER	0.377567	0.5892	2.199725	0.364732	0.339207	0.71465	1.333394	0.536533	0.752599	0.8453	1.283119	0.528122
sp|B7NH52|DEOD_ECOLU-YIAETFLEDAR	1.344032	1.379279	0.550059	0.06499	0.356959	1.193351	0.526663	0.096516	0.356959	0.849388	0.622525	0.096516

sp|P27302|TKT1_ECOLI-AINEDAAGNYIHYGVR	0.239155	1.4061	0.461678	0.94839	0.895023	1.0778	0.892549	0.619749	0.813689	1.24195	0.892549	1.648602
sp|A8A5E7|EFG_ECOHS-ASYTMEFLK	0.452641	0.96865	0.472104	0.336863	0.438536	0.7393	0.903628	1.737109	0.814524	0.6608	0.799801	1.412805
sp|A7ZSK4|RL22_ECO24-LVADLIR	0.490059	0.6265	1.96371	3.353698	0.490059	0.6265	1.96371	3.353698	0.843599	0.7848	1.642709	2.011322
sp|P0ADY2|PPID_ECOL6-AEQQAK	2.963892	0.59685	0.42204	0.264623	1.844953	0.8614	0.299693	0.265847	1.437762	0.8614	1.031087	0.466628
sp|P52643|LDHD_ECOLI-GALIDSQAAIEALK	2.077789	0.93405	1.318017	0.384637	4.045292	0.7417	1.318017	3.136121	5.776557	0.8544	1.287866	0.12993
sp|P0A6F2|CARA_ECO57-DLPLIASNFR	1.54652	3.7415	7.103416	0.458925	2.088759	1.07	5.547361	0.32621	1.026928	1.36455	2.968364	0.559067
sp|P0AFG9|ODP1_ECO57-WDELLR	5.954953	0.3967	0.461066	2.3725	0.848668	0.3967	0.368081	2.449119	2.211815	0.6478	0.337187	2.613939
sp|P0AFG9|ODP1_ECO57-EISTTIAFVR	0.440444	1.508121	1.246801	1.615399	0.551888	2.3878	1.049597	2.678489	1.438539	1.44655	1.611068	1.760216
sp|P0A7W0|RS4_ECO57-AALELAEQR	0.54787	1.6393	1.341627	1.000887	0.54787	1.6393	1.782525	1.422184	0.728689	1.6393	1.530965	1.691398
sp|A7ZSJ4|RL6_ECO24-APVVVPAGVDVK	9.928332	0.4133	0.439009	1.331654	8.186928	0.4133	1.916072	1.331654	2.306085	0.6168	0.732667	1.658226
sp|P31979|NUOF_ECOLI-EEFEAGIK	4.907829	2.845314	0.506696	4.693952	25.7476	4.6528	1.34429	2.691748	2.572618	4.2857	0.967479	1.326743
sp|B7M1N3|RL4_ECO8A-LIVVEK	0.9261	0.5849	1.352547	2.539513	0.748019	0.5849	1.021118	3.319583	1.907599	0.5849	0.825349	2.155559
sp|P0A6Y9|DNAK_ECOL6-SIEPLK	1.530069	1.6159	0.900253	0.512181	0.774389	0.848	1.021195	0.429149	0.974598	0.848	0.961211	0.442591
sp|A8A750|KATG_ECOHS-LDYYGLK	1.539786	0.9825	12.75966	1.260946	0.54601	0.3703	17.96355	0.843641	0.319412	0.3703	20.17837	0.655925
sp|A1A9Q9|NQOR_ECOK1-QPSQEELSIAR	1.51239	0.7235	0.134984	0.335223	1.170427	0.72415	0.322861	0.576582	1.116259	0.70405	0.778927	0.39825
sp|P08200|IDH_ECOLI-GMEGAINAK	0.679932	1.3122	1.612057	0.655701	1.014253	1.1879	1.467231	1.150846	1.189825	1.1293	1.704672	1.228075
sp|B5Z0E9|EFTS_ECO5E-VALVAK	0.530831	0.81305	1.007764	0.952883	1.070686	0.5028	0.663354	0.631121	1.237237	0.8324	0.650495	0.534179
sp|A7ZUM3|PUR9_ECO24-DLGMVGAEELR	0.910248	1.3244	0.290735	1.676899	1.179563	1.16745	0.749666	1.030151	1.032775	1.3244	0.865449	1.196075
sp|B5Z0E9|EFTS_ECO5E-TGAGMMDCK	0.811433	1.312063	1.13339	9.97835	0.895865	2.1961	0.952703	4.655538	0.999909	2.1961	2.013174	0.53524

sp|A7ZPS1|PUR7_ECO24-GEVVLGDEFSPDGSR	2.82405	1.0872	0.643307	1.265227	3.253746	0.4609	1.055009	0.8383	1.469701	0.4047	0.772671	1.046667
sp|A1AGC3|RS9_ECOK1-ALMEYDESLR	0.983895	0.95815	0.878858	2.378633	1.424007	0.95815	1.968947	1.152573	0.935372	0.95815	1.434616	0.979
sp|P0AFG5|ODO1_ECO57-EHLGTGDVK	1.438693	1.157614	0.869769	1.237684	10.11692	0.3037	0.298357	1.379034	1.890786	1.2497	4.632019	0.913666
sp|B7UPE0|RL10_ECO27-GALSAVVADSR	2.298433	0.7945	0.992833	1.630427	1.620264	0.8538	0.626494	1.832803	1.337563	0.883	0.604277	1.706429
sp|P0AER1|GLPF_ECOL6-ETTTPSEQK	2.826928	2.3427	0.560861	1.110388	2.687699	1.9066	0.191605	0.753058	2.656641	1.9066	0.572622	0.725182
sp|P00968|CARB_ECOLI-GVIVQYGGQTPLK	0.737702	0.8355	1.443102	1.446746	2.25156	0.7064	1.870433	1.446746	2.553234	0.7064	1.443102	0.712597
sp|P0AFG7|ODO2_ECO57-DVDTLGMADIEK	0.274598	1.7391	1.209928	0.952802	1.343554	1.7391	0.869851	0.66533	1.062533	1.7391	0.755521	0.751341
sp|P0A9M2|HPRT_ECOLI-DSGSDMVLVGLLR	0.288463	1.080382	1.261891	0.4451	0.362013	1.0523	1.193674	0.255967	0.378449	1.083	1.323372	1.338525
sp|B5Z3U4|TIG_ECO5E-QDVLGDLMSR	0.793115	1.02035	1.779762	0.858599	0.964461	1.4764	1.619074	0.884125	0.969904	1.4764	1.316023	0.707183
sp|P0A9R0|DHAS_ECO57-ELTPAAVTGTLTTPVGR	0.830077	0.99415	1.724452	0.922945	0.850992	1.1175	1.205145	1.316819	0.951629	1.1175	0.922637	2.435296
sp|B7MIU7|RS16_ECO45-VAALIK	2.204423	0.2135	2.14304	2.53244	2.519081	0.2135	2.047024	1.832132	1.067453	0.2048	1.90102	3.542416
sp|P0AC41|SDHA_ECOLI-SVNMEPK	0.541879	1.5437	0.345098	0.70098	2.04692	0.8104	0.241654	0.398505	1.534387	0.7661	0.724976	1.056125
sp|P0A9P2|DLDH_ECO57-HYFDPK	3.860613	0.47965	2.758431	0.120968	2.924687	0.5039	3.871655	0.378745	2.924687	0.5039	2.755219	0.247302
sp|P0A7D6|PURA_ECO57-IVDLLTER	4.250031	1.230574	0.584124	2.813635	5.491471	0.979321	0.584124	2.778456	3.846203	0.2806	0.372487	1.821611
sp|B1IQV7|PNP_ECOLC-WDWQPEPVNEALNAR	2.06247	1.797617	4.950399	3.433082	1.926289	2.1874	6.266751	1.634393	1.926289	2.40095	5.021627	2.964575
sp|P0A717|KPRS_ECOLI-LYTSLGDAAVGR	0.233807	0.8517	1.271868	1.286193	1.001113	0.95915	1.667718	1.453618	1.18511	0.95915	1.603886	1.11033
sp|A7ZSL0|RS10_ECO24-LVDIVEPTEK	0.590301	0.6183	1.057989	0.717065	0.854812	0.89225	0.905508	0.838792	0.900759	0.7936	0.759413	0.837254
sp|P0ACG2|STPA_ECO57-SLDDFLI	1.104238	1.6257	1.548267	0.177157	1.072115	1.6257	1.20048	0.50037	1.136607	1.4343	1.269515	0.574557
sp|A7ZKD6|YCDX_ECO24-VVDGVGILR	0.855572	0.961107	0.468712	0.720749	0.855572	1.135195	0.468712	0.616952	3.463336	1.1597	0.802362	0.545445

sp|B1X8H5|SYGB_ECODH-VANLAEAQPDR	2.078943	1.198555	0.925214	1.435707	1.831431	0.44425	1.937081	0.64182	1.466536	0.44425	1.833565	0.751994
sp|P08200|IDH_ECOLI-VVVPAQGK	0.578327	0.434	2.990524	0.967753	0.981915	0.434	1.110726	0.970294	0.847679	0.434	0.986492	0.691018
sp|K0BE10|TAL_ECO1E-LYNDAGISNDR	1.06567	1.1749	1.730387	0.589617	0.631032	0.94505	1.108397	0.43991	0.559541	1.1749	1.188282	0.362683
sp|P62593|BLAT_ECOLX-VDAGQEQLGR	2.014259	0.51495	2.299505	1.567428	1.900864	0.5481	1.070825	0.957363	1.508155	0.70765	0.945029	0.957363
sp|B5Z0E9|EFTS_ECO5E-AGNVAADGVIK	1.277763	0.53865	0.558314	1.358985	1.277763	0.5391	0.617668	1.802519	1.329405	0.50825	0.596295	0.733129
sp|P0AFG9|ODP1_ECO57-NIAHQVK	11.51471	1.3041	0.544992	0.324788	11.51471	1.3041	0.721107	1.185266	7.880882	1.3041	1.027137	0.370021
sp|A7ZTU5|ATPG_ECO24-ALLDTLLR	0.541347	0.4472	0.132368	0.180995	1.911226	0.8547	0.230435	0.065772	1.911226	0.8276	0.230435	0.065772
sp|P0A7W0|RS4_ECO57-QLVSHK	0.618029	1.763	2.432674	2.352857	0.744149	1.08955	4.094361	1.430767	0.708333	0.4161	4.094361	1.835011
sp|B1IUY2|SYA_ECOLC-GDSNNLADK	0.799494	2.0867	0.876115	0.661797	3.907289	2.0867	0.972085	1.102009	3.049379	2.0867	1.201597	1.184649
sp|B7L4J7|RL5_ECO55-LITIAVPR	0.885592	1.66475	1.656143	0.594399	0.885592	0.93805	1.333694	0.622735	0.86443	1.085	1.333694	0.521227
sp|P15254|PUR4_ECOLI-LLAYHDR	2.135145	0.627061	3.185881	2.482915	2.377493	0.8452	2.437961	1.618395	1.601192	0.6364	0.848232	0.650538
sp|P0A7M2|RL28_ECOLI-GIDTVLAELR	0.629981	1.19335	6.255296	0.361291	2.540268	1.19335	6.48779	0.586691	1.019772	0.7406	7.403224	1.245738
sp|P09373|PFLB_ECOLI-VDDLAVDLVER	2.545999	0.83475	1.072168	2.749842	0.979102	1.1406	0.709178	1.51095	1.100252	1.1406	0.938696	1.153583
sp|P27302|TKT1_ECOLI-DIDGHDAASIK	5.895006	2.184374	0.578273	14.84325	11.61118	2.392618	0.225582	4.241596	9.043055	3.066	0.225582	3.029972
sp|A7ZV12|CH60_ECO24-ATLEDLGQAK	0.453352	0.33285	0.565772	3.73166	0.278683	0.4733	0.708745	1.111872	0.296006	0.6364	0.697475	1.170228
sp|P52643|LDHD_ECOLI-SNDVIQDDVFR	1.563909	1.09295	4.415746	1.006019	0.356046	1.0457	7.169096	0.844608	0.523633	1.0457	11.46619	0.930938
sp|P0AB72|ALF_ECO57-DSQEYVSK	3.204106	0.8705	1.162638	0.872668	2.704704	1.65235	1.257632	0.744883	2.392182	2.1909	1.321219	0.763675
sp|P17169|GLMS_ECOLI-RQDIESNLQYDAGDK	1.373596	2.55515	0.886482	1.395094	1.541958	2.7963	1.15639	1.090655	1.80172	2.55515	0.927343	0.871929
sp|B7NF50|ATPA_ECOLU-ELIIGDR	1.893292	2.9618	1.892986	0.207454	0.848702	1.60495	3.310225	0.497158	0.406811	1.72275	2.101496	0.645606

sp|P0AB72|ALF_ECO57-IFDFVKPGVITGDDVQK	0.82353	1.6574	0.13857	0.656466	0.899211	0.4748	0.13857	0.910888	1.205724	0.71515	0.13857	0.855821
sp|A8A5E7|EFG_ECOHS-YLGGEELTEAEIK	0.292509	1.23415	2.148232	0.57212	0.319228	1.2183	1.166617	1.435513	0.595189	1.11045	1.145454	0.887412
sp|P33602|NUOG_ECOLI-LDDIAAWTYR	1.33217	1.1253	1.215301	0.671147	1.621377	0.8512	1.757658	0.779707	1.257129	0.6758	2.223315	0.779707
sp|A8A5E7|EFG_ECOHS-EFNVEANVGKPQVAYR	8.221128	1.0301	1.142507	1.023972	14.65158	0.3318	2.698592	0.997844	6.883386	0.30585	1.20192	0.967012
sp|A1A9Q9|NQOR_ECOK1-AVAEGASK	1.110048	0.6396	0.897289	0.822588	1.725103	0.6407	0.913091	0.684941	1.411831	0.71665	0.975399	0.646446
sp|P0AFG7|ODO2_ECO57-ELLEDPTR	0.695604	1.1164	0.89513	0.579527	0.745942	1.7381	1.105608	0.923465	1.222715	1.38815	1.537391	0.713587
sp|B7LA23|GLPK_ECO55-AVVMDHDANIISVSQR	1.842542	1.13775	0.946348	2.842325	1.855307	0.898	1.224338	2.849886	1.897131	0.8786	1.064564	3.329754
sp|P25553|ALDA_ECOLI-NDIAMGPLINAAALER	0.110213	0.98885	1.220762	1.295146	0.138783	0.98885	1.784818	0.909982	0.204778	1.17325	2.220903	0.820972
sp|P0A7W0|RS4_ECO57-IYGVLER	0.533463	1.0567	1.078897	1.836499	0.533463	1.0567	1.078897	1.884069	1.034517	1.4767	0.713898	2.656001
sp|A7ZJA8|SUCC_ECO24-LHGGEPANFLDVGGGATK	0.199964	0.2858	0.90035	1.597757	0.257672	0.49175	0.891417	0.778161	0.244827	0.49175	0.927643	0.668875
sp|A7ZPA8|YFBU_ECO24-MEMTNAQR	3.516155	0.92	0.55905	0.296007	7.031801	0.92	0.625196	0.311924	7.031801	0.92	0.595425	0.311924
sp|B5YXN3|KDSA_ECO5E-DPFGAASGGR	8.613032	0.679044	1.773178	0.205058	10.70411	0.547349	1.639151	0.312135	8.983144	0.4868	2.014708	0.692183
sp|A7ZUK1|RPOB_ECO24-VDLSTFSDEEVMR	5.900209	0.607762	36.83231	0.767593	5.900209	0.828064	36.83231	0.743765	6.262387	0.962145	7.558186	0.960489
sp|P0ACA3|SSPA_ECOLI-DSFLASLTEAER	0.320128	1.9858	1.40873	0.160358	2.136509	1.369	0.845852	0.860973	2.757296	1.06855	0.995468	0.648765
sp|P17169|GLMS_ECOLI-GAYGTVIMDSR	1.591232	1.6676	1.355632	0.835487	1.533711	1.6676	1.602393	0.857168	1.533711	1.8575	1.226637	1.652528
sp|A1AF92|GCSP_ECOK1-YMHSLER	1.063457	1.640548	0.830168	0.291814	0.858976	1.487	0.851136	0.104866	0.855164	1.487	0.773508	0.104866
sp|P0A9B3|G3P_ECOL6-AGIALNDNFVK	0.540367	1.33455	0.598728	1.583793	0.849796	1.0224	0.847591	0.78964	1.067234	0.8136	0.768693	0.97785
sp|B7MRB2|RL7_ECO81-DDAEALK	4.321708	2.140951	0.264205	1.719148	8.339617	2.278849	0.103317	1.918258	0.791858	1.753491	0.673141	1.918258
sp|P0AB82|ILVE_ECO57-SVDGIQVGEGR	0.41469	0.6895	3.101795	6.583554	0.724747	0.2409	5.570799	5.933908	0.638763	0.2409	5.567203	3.085278

sp|P0AG68|RS1_ECOL6-QLGEDPWVAIAK	1.34174	0.82015	0.371472	1.663756	1.084076	0.6519	0.388837	0.787292	0.933216	0.6994	0.42598	0.361442
sp|A7ZUK1|RPOB_ECO24-DNLFVR	0.17515	0.704577	0.11782	1.463436	0.210335	0.630313	0.134818	1.66261	2.664745	0.690103	0.081255	1.985866
sp|P0AEY0|MALE_ECO57-TWEEIPALDK	10.95812	0.8376	1.456853	0.784368	5.271311	1.0723	1.105613	0.401329	5.271311	1.153	0.993271	3.089776
sp|A8A750|KATG_ECOHS-AWLTHR	1.861211	0.1956	0.515881	0.223659	2.085428	0.1956	0.445815	0.232585	0.311789	1.1285	0.374174	0.227323
sp|P0A910|OMPA_ECOLI-IGSDAYNQGLSER	0.465699	0.3203	0.872202	0.848648	0.721451	0.7813	0.885128	0.984915	0.878568	1.0449	0.896108	0.840508
sp|A7ZPU1|UPP_ECO24-AGLGMMDGVLENVPSAR	0.918519	1.541705	1.00869	0.560039	0.632673	1.32	0.740675	0.556692	0.729695	1.8884	1.205405	0.501027
sp|B7MTW7|DADA_ECO81-TEQQYENATR	2.203063	3.217058	0.282537	0.942899	2.855764	4.8626	0.265393	1.446925	3.369883	2.8103	0.326241	0.549972
sp|P0A7W3|RS5_ECO57-VGFGYGK	12.56197	0.8989	3.145132	0.60737	0.906142	0.9522	1.876454	1.189398	0.711114	0.9522	0.898155	0.337496
sp|B7L6J2|SYT_ECO55-LSASYVGEDNER	0.2804	1.21205	2.013509	1.003643	0.533293	1.3865	1.274246	0.805101	0.533293	1.3865	2.648038	0.805101
sp|P0AEY0|MALE_ECO57-TAVINAASGR	1.91082	1.3037	1.375165	2.817891	2.126513	1.3037	1.003877	2.817891	2.029021	0.6488	1.003877	2.817891
sp|B5YXD9|ATPD_ECO5E-LADVLQS	0.757143	1.0279	4.421642	0.826248	2.854039	0.4509	2.708388	0.438698	2.179047	0.4509	2.708388	0.438698
sp|P27550|ACSA_ECOLI-TAIIWEGDDASQSK	0.285569	2.1649	0.317201	4.07299	5.996162	2.31215	1.330529	4.034778	2.63875	2.60105	1.142217	1.373152
sp|P0AFH9|OSMY_ECOL6-GVEGVTSVSDK	1.206843	1.4188	0.851418	0.447228	1.42656	1.49985	1.223193	0.680714	1.289712	1.53915	0.763452	0.95
sp|P63285|CLPB_ECO57-GGESVNDQGAEDQR	4.281982	1.9758	0.914131	0.687004	3.216684	1.5364	1.191034	0.750989	3.154628	1.097	1.257103	0.879735
sp|P0AEK2|FABG_ECOLI-AIAETLAAR	0.907442	0.1818	4.761945	0.684815	1.034081	0.1818	6.471374	1.195132	1.066322	0.44625	4.395115	0.476394
sp|P0AE10|AHPC_ECO57-LGVDVYAVSTDTHFTHK	0.836951	0.3941	0.71341	0.280777	1.158381	0.4342	0.949564	0.562766	0.957629	0.349	0.876556	0.387838
sp|P0A9A7|FTSZ_ECOL6-MAFAEQGITELSK	0.907227	0.6692	0.468415	1.224668	0.398405	1.74705	0.366082	1.844419	1.18916	1.9587	0.501683	1.844419
sp|P77395|CNOX_ECOLI-QLYALLY	0.295595	0.83555	1.624003	0.273304	0.340828	1.5057	1.486413	0.392663	0.302838	1.5057	1.486413	0.392663
sp|P0A6Z5|HTPG_ECO57-LFAAAGQK	0.39655	0.921434	1.234315	1.115913	0.39655	0.3413	0.448873	0.217462	0.455463	0.3413	0.496074	0.319453

sp|P69778|LPP_ECO57-VDQLSNDVNAMR	3.561361	1.5911	1.720416	1.084044	2.232048	1.5911	1.257716	1.690288	1.517777	1.1631	1.238405	1.28277
sp|B7NER6|SECB_ECOLU-DISFEAPNAPHVFQK	0.600572	2.6906	2.410168	0.504532	0.605408	1.3236	2.045837	0.359983	0.952969	1.3236	1.765864	0.342899
sp|P0AC41|SDHA_ECOLI-LDHLGK	0.17601	0.682669	0.66647	0.793397	4.011663	1.0226	0.28055	1.167328	1.593542	0.90845	0.484319	0.866848
sp|B7UPB0|ACP_ECO27-ITTVQAAIDYINGHQA	0.85999	1.227481	0.697727	0.81239	0.623285	1.4864	0.493619	0.989602	0.625522	0.5881	1.0104	1.179953
sp|P36683|ACNB_ECOLI-QGLLTVEK	0.881863	2.4768	1.810681	0.280553	1.830766	2.3075	1.625873	0.460109	1.519185	2.13395	1.498558	0.646909
sp|A7ZNR4|GATZ_ECO24-IYDVLR	0.847549	0.8406	0.645092	0.616267	0.670783	0.676	0.752692	0.839079	0.568193	0.8406	0.946991	0.673271
sp|K0BE10|TAL_ECO1E-ISTEVDAR	0.849773	0.812	2.360755	0.126641	0.954325	0.812	2.334273	0.118156	0.811537	0.9563	2.334273	0.172496
sp|A7ZSL4|EFTU1_ECO24-HYAHVDCPGHADYVK	0.986544	1.18315	0.832878	0.303166	1.275007	0.90595	0.67183	0.419209	1.198589	1.0163	0.930213	0.932333
sp|K0BE10|TAL_ECO1E-LTIAPTLLK	0.49575	0.7291	0.526848	2.188975	0.991762	0.63285	1.305542	1.155267	1.084211	0.7291	0.91197	1.243775
sp|A7ZST1|PCKA_ECO24-DTFWWADK	1.009682	0.6047	0.704494	0.537886	0.648917	0.6047	1.150611	0.656449	0.606042	0.6173	1.299536	0.605622
sp|A7ZMI4|RL20_ECO24-AGQYAYR	3.749614	1.563573	0.320147	1.320651	6.441496	0.872172	0.662233	1.320651	3.28125	0.58035	0.662233	1.320651
sp|A7ZTU4|ATPB_ECO24-TIAMGSSDGLR	2.772151	1.1172	1.459152	0.575202	2.479624	1.2177	1.241592	0.459102	2.008139	1.3182	1.472664	0.753931
sp|B7MZ75|ENO_ECO81-DQAGIDK	2.182236	0.2156	8.227498	1.379658	2.804667	0.5619	1.910347	0.915831	2.444432	0.9082	1.224216	0.553469
sp|P0A6G1|CH10_ECO57-GEVLAVGNGR	0.870932	0.44385	0.384225	1.497628	0.282678	0.33795	0.551212	1.877708	0.28304	0.33795	1.257845	1.496987
sp|K0BE10|TAL_ECO1E-FAIDQEK	0.567927	1.3802	0.473763	0.477192	0.827236	0.7539	0.473763	0.510472	0.961968	1.06705	0.790923	0.537045
sp|A7ZTU5|ATPG_ECO24-SWDYLYEPDPK	0.305805	1.6409	0.60383	1.569236	0.710801	1.6409	0.700974	1.569236	1.025021	2.01035	1.036643	1.569236
sp|A8A6H0|TNAA_ECOHS-GNFDLEGLER	1.188703	1.8067	1.535642	1.638847	1.179901	1.5853	1.833567	1.808495	1.179901	1.3626	1.293579	1.857512
sp|P07014|SDHB_ECOLI-LDGLSDAFSVFR	1.133928	0.9559	0.969716	0.064231	1.170262	0.9559	0.957212	0.051976	1.151808	0.9559	0.989932	0.051976
sp|A7ZSJ0|RL15_ECO24-VILAGEVTTPVTVR	0.512312	0.775114	0.084642	0.309239	0.348196	1.1421	0.084642	0.203183	0.355144	1.1421	0.15425	0.346089

sp|P27302|TKT1_ECOLI-GEMPSDFDAK	3.364613	1.202	0.77259	0.489962	1.370875	1.202	0.700418	0.637597	0.803931	1.63545	0.71871	0.614312
sp|A8A750|KATG_ECOHS-DFVAAWVK	1.744499	0.86	0.385556	2.124109	6.997974	0.3209	0.560209	2.52911	0.521079	0.8534	0.345231	3.129451
sp|B1XB97|HSLU_ECODH-MQLNEELR	3.67133	2.30035	1.871235	0.532508	3.67133	2.30035	1.871235	0.532529	3.186381	2.6269	0.945173	0.804739
sp|P0A6F2|CARA_ECO57-LTIVPAQTSAEDVLK	0.928161	2.1739	1.000776	0.404072	1.273397	1.1672	0.727775	1.096097	1.10731	1.1463	0.834259	0.403913
sp|P0AGE1|SSB_ECOL6-LAEVASEYLR	0.531238	0.3982	0.882815	0.202715	0.555627	0.3982	0.975131	0.202715	0.673182	0.3982	1.086546	0.202715
sp|P63285|CLPB_ECO57-TIQVLQR	1.03561	2.0854	1.055065	2.299772	0.689061	1.5907	0.673987	2.155542	0.655223	1.4777	0.673987	1.634938
sp|P0A6Z5|HTPG_ECO57-DEVIDHLGTIAK	0.4571	0.9638	0.772591	6.897912	0.744452	0.97635	0.86002	2.18643	0.862251	0.89965	0.973041	3.366785
sp|P63285|CLPB_ECO57-LPQVEGTGGDVQPSQDLVR	1.550827	0.9417	0.966714	0.663615	1.495835	1.0327	1.142306	0.479734	1.486883	1.0327	1.170827	0.418936
sp|P0AF93|RIDA_ECOLI-AIVEAAGLK	0.602549	0.9886	0.32991	0.854781	0.88765	0.9886	1.064988	0.855229	1.658434	0.88385	0.520129	0.665599
sp|P25516|ACNA_ECOLI-NEMVPGVEGGMTR	2.135735	0.7122	0.859698	0.141471	2.474049	0.7122	1.04329	0.098681	3.152702	0.7122	0.671292	0.09635
sp|P00509|AAT_ECOLI-TAQTPGGTGALR	1.268063	3.1471	1.498247	0.484558	0.88859	3.1471	2.466652	0.502417	0.654931	2.0986	1.886549	0.279351
sp|B7UK34|RL14_ECO27-AVVVR	2.64818	0.7068	3.999268	1.078515	0.417237	0.7068	3.434593	1.301926	0.394888	0.7068	3.434593	1.299055
sp|P0A9G6|ACEA_ECOLI-LAADVTGVPTLLVAR	0.977099	0.83715	0.670164	0.249437	0.83488	0.9392	0.457953	0.322344	0.83488	0.8935	0.622798	0.295305
sp|P0ACF4|DBHB_ECOLI-IAAGADISK	0.804354	1.4357	1.092028	2.032588	0.737372	1.2679	1.092028	0.453766	0.902734	1.2945	0.992487	0.601515
sp|A7ZQP6|FUCI_ECO24-VQAVDMTELR	0.692983	1.1062	1.155379	0.933976	0.629129	1.42255	1.029876	1.016609	0.528591	1.7104	1.263091	1.041521
sp|P00968|CARB_ECOLI-LIVIEMNPR	3.248588	1.5758	0.492245	1.316494	5.303115	1.5758	1.100917	0.628232	4.787898	1.5758	1.409633	0.628232
sp|A7ZTP1|IBPA_ECO24-TYLYQGIAER	1.260539	1.1874	1.080237	0.185735	0.926614	1.1874	1.047589	0.353777	0.823384	1.1874	0.884137	0.353777
sp|P0ABH7|CISY_ECOLI-ILILHADHEQNASTSTVR	1.416647	0.53375	0.403698	2.395251	1.062013	0.6811	0.403698	0.945848	0.763877	0.6811	0.343653	1.446807
sp|P0A8M1|SYN_ECOL6-LDVLDER	0.631897	1.1155	4.076542	1.019656	0.765848	1.1155	2.576439	1.912757	0.858329	1.29265	3.068852	1.902493

sp|B6I586|SYH_ECOSE-AIGEVTDVVEK	1.07364	0.6154	1.871909	0.225436	1.275126	0.6826	1.581652	0.224783	1.109017	0.6739	1.819793	0.250991
sp|B7LA26|RRAA_ECO55-ASFGGQIITVK	3.145454	0.87785	0.494576	4.39401	4.506934	0.87785	0.438999	6.888092	1.275971	0.87785	0.364417	4.39401
sp|A7ZST1|PCKA_ECO24-TTLSTDPK	0.263569	1.0149	0.342506	1.80824	0.430833	1.26095	0.729443	2.286026	1.097191	1.2452	1.071103	1.312291
sp|B5YTN8|RL2_ECO5E-ATLGEVGNAEHMLR	0.338858	1.7451	1.616152	1.930006	0.184248	0.7515	1.642948	1.930006	0.184248	0.9333	1.312911	1.917019
sp|A7ZJD0|GPMA_ECO24-HYGALQGLNK	0.147126	0.93998	0.888816	0.561615	0.076921	0.705046	0.815401	0.337522	0.076921	0.823124	1.199208	0.15119
sp|A7ZV12|CH60_ECO24-QIVLNCGEEPSVVANTVK	0.686751	0.8397	0.989042	0.564984	0.479504	0.7524	1.225227	1.628376	1.718733	0.6651	1.041037	1.494382
sp|P0AG68|RS1_ECOL6-GVVVAIDK	1.099533	0.71725	8.242933	0.73434	0.272098	0.7949	1.961995	1.035146	0.524267	0.902	0.623219	0.979617
sp|P0A9G6|ACEA_ECOLI-LLHGESK	1.60609	1.04404	0.659656	0.939995	5.621867	0.960888	0.961982	0.444346	3.753561	0.7547	1.264307	0.671846
sp|P08200|IDH_ECOLI-ADSADAEK	1.572222	1.43735	0.551605	1.245918	1.779698	1.1902	0.595163	0.769861	2.384761	1.1299	0.742447	0.837693
sp|Q1R626|RL18_ECOUT-DVSFDR	3.082622	0.873072	2.70399	2.238526	3.512458	0.960847	3.147271	2.218487	5.16248	0.5674	4.881852	1.230543
sp|A7ZSJ4|RL6_ECO24-QVIGQVAADLR	6.142667	1.37625	1.319786	1.420685	3.632931	0.9451	1.60096	0.572102	2.199239	0.8943	1.24206	0.534199
sp|P23839|YICC_ECOLI-MQSDEGEINPVDILR	1.537702	1.586159	2.00035	4.986835	1.423363	1.703255	2.302544	3.049215	1.341617	1.653172	1.496184	2.097405
sp|B5Z2K8|RL9_ECO5E-DIADAVTAAGVEVAK	1.003834	1.4795	1.589527	0.92127	0.747401	1.4795	1.640169	0.47564	0.757931	1.0929	1.355851	0.751314
sp|P62593|BLAT_ECOLX-DAEDQLGAR	0.921837	0.6622	1.038978	0.586345	1.1727	0.4812	0.22731	0.484566	0.753205	0.4812	1.390109	0.710993
sp|P0ABK0|CYDA_ECOL6-DLGYGLLLK	0.426366	0.790315	0.923708	1.295554	0.227183	0.4997	1.411732	17.39821	0.162814	0.47535	0.56208	17.39821
sp|A1AGI6|RPOA_ECOK1-GYVPASTR	0.140736	0.843754	0.959044	0.448776	0.140736	0.855891	1.125866	0.458912	0.23626	1.067954	0.649489	0.370082
sp|P0A8N6|SYK2_ECO57-DSLPEGVYNDQFK	1.658839	0.8111	0.872202	0.543019	2.345225	1.27	0.79273	0.872694	1.241393	1.27	0.911116	1.093432
sp|A7ZSL4|EFTU1_ECO24-LLDEGR	0.468249	0.2107	0.775616	2.275822	0.464958	0.19165	0.192774	2.847374	0.415972	0.19165	0.775616	2.847374
sp|A7ZQ54|GRPE_ECO24-ALEVADK	1.360536	1.2579	0.906435	0.415878	2.001279	0.5331	1.151999	0.606123	1.664322	0.7681	1.851616	0.606123

sp|P0AC39|ASPA_ECOL6-LVDAINQLR	0.839344	0.809862	0.407372	0.518975	0.870033	0.7054	0.655956	0.274956	0.563926	0.7054	0.685467	0.284918
sp|P0A9P2|DLDH_ECO57-EDGIYVTMEGK	2.430482	1.5803	0.968333	0.281526	1.055759	1.5611	0.606779	0.316979	0.855167	1.49855	0.806495	0.331198
sp|P0A7D6|PURA_ECO57-DPFDA	0.327414	0.659739	0.958262	0.128415	1.080021	0.25515	0.979454	0.264582	1.246472	0.6222	0.944956	0.267266
sp|A8A5E7|EFG_ECOHS-IGEVHDGAATMDWMEQEQER	0.336774	0.5854	0.94245	1.094922	0.336774	0.5854	0.664728	1.715083	0.506688	0.5854	0.76517	1.219931
sp|B7UHB4|CSRA_ECO27-MLILTR	0.738001	0.623903	1.657997	0.380617	0.264174	0.4018	1.543276	1.385591	0.284139	0.86995	1.26658	2.390566
sp|A7ZSJ4|RL6_ECO24-LQLVGVGYR	0.745117	0.7537	0.341941	0.169964	0.569578	0.7537	0.402433	0.180611	1.042095	0.7537	0.094138	0.180611
sp|A1AGI6|RPOA_ECOK1-DEVILTLNK	1.387035	1.28605	0.846495	1.277732	1.700174	1.3696	0.868343	1.355678	1.943758	1.28605	0.956766	0.837433
sp|P04825|AMPN_ECOLI-DQEFSSDLGSR	1.944862	0.9508	0.472016	0.745583	1.926478	0.9272	0.577232	0.591233	1.53301	1.0528	0.605341	0.506019
sp|A7ZJA8|SUCC_ECO24-ELYLGAVVDR	0.680451	0.7782	1.745238	0.89254	1.072498	0.7782	1.745238	1.529323	0.949127	0.7782	1.385289	1.218868
sp|P0AGE1|SSB_ECOL6-VILVGNLGQDPEVR	1.080782	0.534287	0.68235	1.642239	1.198778	0.3286	1.672772	1.435985	1.198778	0.28955	0.937612	1.69683
sp|B7UPB0|ACP_ECO27-IIGEQLGVK	0.793078	1.82925	0.054983	0.185859	0.534057	0.6289	0.345783	0.47765	0.814858	0.90555	0.557753	0.436404
sp|P63285|CLPB_ECO57-MSELQYGK	0.205754	0.6655	0.90103	1.04508	0.378158	1.2529	1.225589	1.116175	0.400931	1.32825	1.315124	1.128484
sp|A1AF92|GCSP_ECOK1-EETGISELDIAK	0.125812	0.8194	1.469883	2.248204	0.40294	1.8631	1.025703	1.417178	0.557733	1.8568	1.430627	1.021831
sp|P0A9B3|G3P_ECOL6-DGHLIVNGK	0.625856	0.4036	0.069163	0.852583	0.482935	0.2547	0.145298	0.857075	2.128477	0.2547	0.186758	0.915268
sp|A7ZV12|CH60_ECO24-VTLGPK	4.265007	0.891517	0.551787	1.036829	1.585664	0.75055	0.920982	1.917186	1.585664	0.8166	0.784928	2.861621
sp|P0A9M8|PTA_ECOLI-YQLTELAR	2.30979	1.253294	0.321263	0.598275	2.269325	1.159	0.557216	0.355931	1.071247	1.159	0.382998	0.365232
sp|P62593|BLAT_ECOLX-QQLIDWMEADK	0.926674	0.824	0.908106	0.506975	0.935942	0.8483	0.832598	0.585818	0.944593	0.83615	0.729805	1.276591
sp|P0AE10|AHPC_ECO57-NFDNMR	7.3537	0.590427	1.508829	0.558543	3.822571	0.2266	1.837134	0.533874	4.533504	0.2266	1.644739	0.533874
sp|B5Z2K8|RL9_ECO5E-NFLVPQGK	0.832491	0.7489	1.401401	1.589375	0.548195	0.56835	1.546494	1.625534	0.539341	0.5483	0.985541	0.796884

sp|P0AEY0|MALE_ECO57-DVGVDNAGAK	0.591346	0.6971	2.039654	0.331731	1.292756	1.2549	1.857843	0.373351	1.519409	2.04175	1.681077	0.422536
sp|B7MYP6|RL19_ECO81-GLHSAFTVR	0.755253	1.491263	1.445888	0.400026	0.693489	1.6126	0.330444	0.385056	0.423245	1.6126	0.849441	0.286212
sp|P0A9G6|ACEA_ECOLI-EWTQPR	0.505571	0.4403	0.653952	0.598338	0.467625	0.4403	1.036296	0.598338	0.663745	0.4403	0.923601	0.639361
sp|P36683|ACNB_ECOLI-GGVSLRPGDGVIHSWLNR	0.387062	1.5876	2.513592	2.214727	0.373739	1.1615	1.243441	1.608163	1.118931	1.397	1.043129	0.836569
sp|P37330|MASZ_ECOLI-NFDEIVHDLAPENR	0.581345	1.5493	0.217587	0.734623	0.870297	0.9203	0.611269	1.565449	0.870297	0.9203	1.959868	1.565449
sp|A8A5E7|EFG_ECOHS-YDEAPSNVAQAVIEAR	0.760661	0.3334	0.578323	4.112604	1.120634	0.81025	0.786482	1.420587	1.04596	0.7415	0.813282	1.362574
sp|A8A5E7|EFG_ECOHS-VTDVEGK	0.677604	0.73895	1.040021	0.799781	0.908402	0.91235	1.36863	0.820524	1.173325	0.91235	1.175809	0.618361
sp|A1AGI6|RPOA_ECOK1-GLAVR	0.49882	0.5797	3.566714	1.522098	0.44635	0.5797	3.183883	1.42345	0.307492	0.5771	2.488105	1.504357
sp|P0AG32|RHO_ECO57-GEVVASTFDEPASR	0.739066	1.2842	1.17663	1.552672	1.295357	1.2842	1.245226	1.552672	1.442114	1.407	1.082841	0.697373
sp|A7ZJA8|SUCC_ECO24-VALDPLTGPMPYQGR	0.685357	0.8436	0.765876	0.555567	0.720461	1.00325	3.869144	0.446624	0.699858	0.8751	1.054945	0.48965
sp|P23538|PPSA_ECOLI-IEDVPQEQR	0.109108	0.3781	1.153899	1.242621	0.109108	2.2381	1.037329	1.335771	0.109108	2.2381	0.73015	0.915418
sp|A7ZQ54|GRPE_ECO24-AAMVTVAK	0.804758	5.2907	1.387915	0.190698	0.292953	0.7191	2.940341	0.471831	0.533872	0.5512	2.063682	0.530568
sp|P0A7B0|IPYR_ECO57-AEIVASFER	0.978097	0.7021	0.975602	3.91397	1.313828	2.0802	1.16811	3.91397	0.689417	0.7021	1.386367	3.388232
sp|P0A9S3|GATD_ECOLI-SVVNDTDGIVR	1.187291	3.4714	0.703277	1.578387	1.943335	3.4714	1.281771	1.578387	2.430289	1.24565	0.954037	2.061573
sp|Q1R6A9|RL13_ECOUT-DWYVVDATGK	1.444638	0.751	1.264119	0.719419	1.997516	0.7674	1.221144	1.083094	1.173594	0.7838	1.006527	0.555433
sp|P0A6Z5|HTPG_ECO57-EILQDSTVTR	1.129893	1.6864	1.220642	0.971743	1.189453	1.3005	1.905603	1.14353	1.256223	1.1548	2.032386	0.818872
sp|P00550|PTM3C_ECOLI-GASPLSAGDVTNDLSHVR	1.675858	0.868447	1.147972	1.500394	1.373025	0.3739	1.136569	2.086294	1.610334	0.3739	1.643317	2.143125
sp|P0A6Y9|DNAK_ECOL6-QVEEAGDK	0.866654	0.7333	1.653532	0.902954	0.84232	0.8407	1.092494	0.942609	0.869672	1.0156	1.337289	0.976737
sp|P0A802|RPOZ_ECO57-QEQQEQEAAELQAVTAIAEGR	1.424784	1.912546	1.01604	0.415649	0.498093	1.7782	1.497639	0.386027	0.938956	3.76685	1.442796	0.688086

sp|P68206|YJBJ_ECOLI-DEAGGNWK	0.368839	1.099121	0.745909	1.526923	2.599753	0.6264	0.431264	1.526923	0.903726	0.8509	0.727245	2.379133
sp|A1AIG0|RPOC_ECOK1-GDVISDGPEAPHDILR	0.884969	1.2361	0.875753	2.113048	2.014426	1.13035	0.913444	1.105042	1.364633	1.13035	0.944307	1.324238
sp|P31979|NUOF_ECOLI-NPGLWELPFGTTAR	1.395738	0.8296	1.326871	0.222524	1.587898	0.8296	1.423085	0.383247	1.40999	0.9023	1.4198	0.372205
sp|P0AG32|RHO_ECO57-AYNTVVPASGK	0.282966	1.2076	1.232055	0.665039	0.929991	1.17605	0.942726	0.364227	1.037482	1.17605	1.054969	0.426835
sp|P0AEU7|SKP_ECOLI-DITADVLK	1.286349	1.1295	2.314837	1.433282	1.024864	0.85295	1.233434	1.154604	1.189253	0.95815	1.25039	1.219591
sp|P0A7B0|IPYR_ECO57-VEGWENAEAAK	0.197539	1.4389	2.371794	0.773756	2.291644	1.51085	2.634109	0.467143	0.952441	1.2452	2.274117	0.798295
sp|P0A9Y7|CSPC_ECOL6-WFNESK	1.04937	0.574582	1.256495	0.416337	0.73299	0.489013	0.901866	0.47731	0.955896	0.5514	0.694669	0.779548
sp|P0ACJ1|LRP_ECOL6-NILNELQK	3.567652	0.71855	1.261642	0.143964	4.293935	0.852	0.727677	0.611933	4.092796	0.73155	1.012329	0.300899
sp|P0A910|OMPA_ECOLI-DVVTQPQA	2.154251	0.2114	0.432606	0.312844	1.405582	1.2282	1.044787	1.704128	1.258027	1.205	1.00885	1.774859
sp|B1IQV7|PNP_ECOLC-VTDYLQMGQEVPVK	0.391275	0.5917	0.234284	1.294863	0.554427	0.6117	0.500886	0.949963	0.806074	0.6347	0.490828	0.949963
sp|B1IUY2|SYA_ECOLC-GLALLDEELAK	0.706427	0.62095	0.781658	0.457341	0.92055	0.62095	0.704093	0.442814	1.187465	0.62095	0.759306	0.716996
sp|P00968|CARB_ECOLI-NASMAVLR	2.572255	1.018866	0.977187	0.064598	1.696844	1.0869	0.308943	0.051587	1.696844	1.0869	0.308943	0.064598
sp|P08839|PT1_ECOLI-VLGFITDAGGR	2.293566	0.65785	3.822976	0.417279	2.745957	0.9448	1.268979	1.227782	1.796914	0.9705	1.076587	1.904276
sp|A8A6H0|TNAA_ECOHS-SYYALAESVK	0.743833	0.8205	0.369737	0.497005	0.6242	0.8205	0.552419	0.493207	0.533738	0.8414	0.604301	0.604472
sp|A1AGC3|RS9_ECOK1-SLEQYFGR	0.379611	2.692811	2.264838	1.473432	0.581155	2.93945	19.28064	1.285489	0.589699	2.6703	4.166111	1.475057
sp|B7MIX0|RL1_ECO45-GLMPNPK	1.069999	0.97645	0.702882	0.682736	1.070221	0.9996	1.205051	0.654329	0.668548	1.0535	1.026938	0.560299
sp|B7UJP9|YAJQ_ECO27-NAVDNASR	0.145078	1.85695	0.156056	0.308755	0.146271	1.85695	0.156056	0.538993	0.193286	1.85695	0.334191	0.767864
sp|A7ZNR4|GATZ_ECO24-DHFAILK	0.183501	0.52	1.850477	1.717945	0.653393	0.52	1.850477	0.806662	1.186579	0.52	2.014887	0.743558
sp|A8A6H0|TNAA_ECOHS-EAFDTGVR	0.521034	1.3491	1	1.378406	0.521034	1.3491	1	1.180983	0.521034	1.3491	1	1.136675

sp|B7UK34|RL14_ECO27-IISLAPEVL	0.60818	2.1776	1.282138	0.082938	0.60818	2.1776	1.282138	0.230527	1.085034	1.5711	1.293161	0.225544
sp|P63285|CLPB_ECO57-VIGQNEAVDAVSNAIR	2.32569	0.4517	0.851774	1.465557	1.655422	0.5929	1.066449	0.861493	1.047706	0.62785	0.99014	0.856536
sp|B1X8H5|SYGB_ECODH-VIADYEER	1.02414	0.831033	1.322489	0.127791	1.41723	0.749006	0.944399	0.121558	0.706217	0.888039	0.483434	0.074716
sp|P06959|ODP2_ECOLI-SEFAENDAYVHATPLIR	2.012665	0.7227	0.22207	1.803758	1.39942	0.9209	0.386978	1.336467	1.362825	1.32275	0.386978	1.053496
sp|P06959|ODP2_ECOLI-TDITELEAFR	1.634043	1.567013	2.18481	0.518133	1.729368	1.844	1.670365	0.717088	1.709435	1.844	1.278735	1.164073
sp|A8A5E7|EFG_ECOHS-AKPVLLEPIMK	2.262461	0.893598	0.101239	2.342431	2.920219	1.5732	0.173898	0.801114	2.988798	0.98725	0.173898	0.81896
sp|P0A9M8|PTA_ECOLI-TGGDAPDQTTTIVR	1.124551	1.9853	0.899354	0.520195	0.944353	1.9853	0.955038	0.514204	1.156863	1.5895	0.923186	0.485984
sp|A1A9Q9|NQOR_ECOK1-VDGAEVVVK	2.264364	0.4574	0.583799	1.310984	0.889197	0.4574	1.687988	1.656923	1.256718	0.4574	1.687988	0.751523
sp|P0AA18|OMPR_ECO57-ALVSHPR	2.686051	0.6005	3.408693	3.284065	2.817092	0.7695	2.733462	1.044326	2.817092	0.7695	1.955553	0.843672
sp|A7ZV12|CH60_ECO24-QQIEEATSDYDR	2.369939	0.3356	0.548811	2.790276	1.302682	0.6261	0.482109	2.16333	0.70431	1.0997	0.469808	1.538021
sp|P0A7W0|RS4_ECO57-IEQAPGQHGAR	1.158083	0.6221	1.266728	1.237464	1.207927	0.953	0.934748	0.326832	1.028013	1.1351	1.129975	0.722338
sp|P0A9L3|FKBB_ECOLI-VINQGEGAIPAR	0.823388	0.5748	0.721865	0.339242	0.783905	0.7734	0.687839	0.349041	1.402876	0.84795	0.646127	0.347007
sp|P06959|ODP2_ECOLI-FNSSLSEDGQR	0.938955	1.70775	0.542749	4.434337	0.754672	1.3147	1.187456	2.760954	0.478926	1.3147	0.864976	2.697465
sp|P0AFG9|ODP1_ECO57-TFGMEGLFR	1.090519	0.3574	0.76611	1.354562	1.08953	0.4634	0.597896	1.580487	1.056017	0.5563	0.811474	1.35492
sp|P28904|TREC_ECOLI-SFQDTTGSGTGDLR	0.868853	0.6723	2.155972	0.209798	0.982385	0.6723	1.29136	0.308851	1.726217	0.9299	1.547794	0.388566
sp|P0A9K5|PHOL_ECO57-LGFLPGDLSQK	0.78342	1.25895	1.14713	0.412808	1.045362	1.2654	0.841698	0.823848	0.741983	1.25895	1.34348	2.350474
sp|P0A9Q3|ARCA_ECO57-TMNLGTVSEER	0.96332	1.1059	1.317452	1.042138	0.628092	1.8753	1.478019	1.678267	0.708248	1.8753	1.517526	1.301347
sp|P0AB55|YCII_ECOLI-LQLLHDEGR	2.760381	0.1084	0.932831	1.539399	2.806597	0.4046	0.536745	2.148496	2.806597	0.4046	0.521036	1.654932
sp|B7N1C2|RS7_ECO81-FVNILMVDGK	0.476174	0.5484	0.855154	0.624327	0.947418	0.6319	1.071616	0.272958	0.850941	1.90835	1.092528	0.325661

sp|A8A466|PGK_ECOHS-ASLPTIELALK	1.09633	4.3008	0.751858	1.763006	2.606351	4.3008	0.751858	1.270303	1.782959	3.4719	0.797799	2.107745
sp|P15288|PEPD_ECOLI-EAVPAGFETFK	1.378967	2.0635	0.923707	1.175819	1.211119	1.9216	0.798805	1.02789	1.256608	1.81455	1.084274	0.677661
sp|P0ADZ2|RL23_ECO57-AYVTLK	0.993271	0.1291	0.739796	0.722526	0.939437	0.3947	1.120408	0.704277	0.924358	0.1741	0.592759	1.028147
sp|A7ZST1|PCKA_ECO24-DALLENVTVR	2.58272	0.52013	1.024802	6.999036	1.566576	0.6925	0.851287	4.078543	1.575598	0.5907	1.10607	2.013694
sp|P36683|ACNB_ECOLI-EGIEPDQPGVVGPIK	2.182444	1.2521	0.230335	1.140251	1.845734	1.3692	1.177315	0.699378	1.772421	1.3692	0.676129	0.569358
sp|P00350|6PGD_ECOLI-AAVLPANLIQAQR	1.027932	0.4284	1.156103	0.53998	0.40738	0.6035	1.138721	1.124877	1.799832	0.87835	1.667094	0.891937
sp|P0A9Q7|ADHE_ECOLI-GSLPIALDEVITDGHK	0.477761	1.6078	0.975158	0.265781	0.37535	2.05245	0.649208	0.812506	0.574056	2.1229	0.934525	0.716998
sp|A1AIG0|RPOC_ECOK1-DLLGITK	0.032585	0.556985	3.156943	0.355216	0.084094	0.34125	1.957176	0.426745	0.078079	0.34125	1.957176	0.710781
sp|P0A6Y9|DNAK_ECOL6-TTPSIIAYTQDGETLVGQPAK	0.461076	1.26055	2.974111	1.10305	0.687818	1.2988	2.543705	0.746094	0.632532	1.26055	1.77962	0.909839
sp|P23538|PPSA_ECOLI-DSGVVSELFDER	2.825617	0.6961	1.303133	5.277929	1.349311	0.97125	0.987417	0.519925	1.195052	0.6961	0.264465	0.520321
sp|P0ACA3|SSPA_ECOLI-LPQLGIEFSGPGAK	0.584794	1.467606	0.626343	4.366706	0.584794	1.357997	0.626343	4.366706	1.019367	1.5378	1.11279	3.998418
sp|B1LNK7|GLYA_ECOSM-EAMEPEFK	1.037985	1.312	1.34063	0.860514	1.218528	1.1784	1.371979	1.122836	1.225402	1.4922	1.260373	1.12688
sp|P0AG68|RS1_ECOL6-YPEGTK	1.846139	0.4155	0.988469	1.543544	1.513093	0.454	0.553465	1.916802	1.89986	0.7671	3.938963	0.683333
sp|A7ZTU4|ATPB_ECO24-YTLAGTEVSALLGR	0.842333	1.1668	0.715883	2.404895	0.834197	1.1274	0.617681	1.186267	0.741397	1.0008	0.668608	1.176713
sp|P0A9B3|G3P_ECOL6-YDSTHGR	1.158257	2.799063	0.870882	0.990908	1.326965	2.8676	0.968533	1.011412	1.326965	2.8676	0.606107	1.354499
sp|Q0TCG3|RS13_ECOL5-IAGINIPDHK	0.757969	0.579	1.541905	4.653247	1.046298	0.579	1.518828	1.752161	0.990482	0.9727	1.226716	1.221306
sp|A7ZSD0|MDH_ECO24-IQNAGTEVVEAK	1.516008	0.66775	0.954727	0.371361	1.396511	0.8102	0.902931	0.441094	1.312332	0.9054	1.098047	0.423397
sp|P0A3B2|TYPA_ECO27-INIVDTPGHADFGGEVER	1.670649	3.4587	1.669246	0.553493	2.790954	2.078	0.644782	0.556401	3.945114	2.078	0.984017	0.60834
sp|P0ACD5|ISCU_ECOL6-VNDEGIIEDAR	2.027333	0.39175	1.393792	2.274474	1.661698	0.39175	1.100302	1.352278	1.54018	0.5456	0.908949	1.084611

sp|P0ABK0|CYDA_ECOL6-AYSLLEQLR	3.329215	1.7729	0.304478	0.111647	2.626972	1.7729	0.304478	0.1071	2.525041	1.7729	0.304478	0.106856
sp|A7ZV12|CH60_ECO24-VEDALHATR	0.75302	0.5385	1.742447	1.414114	0.775234	0.5385	1.747664	2.091963	0.775234	0.5385	1.545351	2.294509
sp|P0A9P2|DLDH_ECO57-IWDSTDALELK	1.406452	1.14095	0.810863	0.488656	0.794485	1.17575	0.95254	1.129699	0.613827	1.17575	1.211189	0.93338
sp|A1AGI6|RPOA_ECOK1-AEAIHYIGDLVQR	1.085816	0.4807	2.371134	3.29547	0.173783	0.4807	2.922484	2.641899	0.441711	0.40015	2.562695	2.673576
sp|P36683|ACNB_ECOLI-DVAESDR	0.931267	0.6197	0.509077	2.088884	0.734972	0.6197	0.314356	2.396131	4.355995	0.6594	1.005286	2.019244
sp|B7NF50|ATPA_ECOLU-GYLADVELSK	0.737412	0.9541	1.089088	1.413389	0.944182	1.2069	1.070474	2.039916	0.764137	1.1935	0.695973	1.76489
sp|B1LL63|ATPF_ECOSM-AEAQVIIEQANK	0.318288	0.8577	1.244123	2.650502	0.564449	0.6474	0.932614	1.493384	1.244363	0.61735	1.377449	1.597897
sp|B1XB97|HSLU_ECODH-EVDSIIR	0.60303	0.994855	2.81283	0.403703	0.850025	1.01775	2.352775	0.774371	0.850025	1.01775	0.618738	0.995624
sp|P0A807|RRF_ECO57-SMSPAVEK	2.145731	0.6641	2.121011	0.852605	2.169237	0.76595	0.712244	0.343669	1.22802	0.76595	1.347459	0.282101
sp|P63285|CLPB_ECO57-TAIVEGLAQR	0.936079	1.259959	0.102451	0.340264	0.639459	1.3867	0.102451	0.587164	0.670966	1.3867	0.223189	0.587164
sp|B1LNK7|GLYA_ECOSM-YAEGYPGK	0.314337	0.83	1.54832	0.728954	0.451362	0.80965	1.168186	0.295364	0.522902	0.8731	1.288203	0.38404
sp|B7LA23|GLPK_ECO55-DVLEAMQADSGIR	0.861446	1.1599	1.83069	0.357665	1.444433	0.8448	1.215282	0.540082	1.444433	0.7954	1.199708	0.533719
sp|B1X8W6|ARNB_ECODH-DALMEALK	1.441749	0.2935	0.782115	0.53489	1.366033	0.4415	0.661622	0.500331	2.590679	0.4415	0.715419	0.613861
sp|P62593|BLAT_ECOLX-VLLCGAVLSR	1.831715	1.645614	1.62307	0.640992	1.817076	0.9017	2.776306	0.533786	1.493792	0.9017	1.467668	0.492447
sp|Q19NJ4|CH602_ECOK1-VEDALHATR	0.75302	0.5385	1.742447	1.414114	0.775234	0.5385	1.747664	2.091963	0.775234	0.5385	1.545351	2.294509
sp|P0A9B3|G3P_ECOL6-DNTPMFVK	5.236669	0.5406	1.134134	1.234468	2.382036	0.6279	0.381993	1.462128	1.513441	0.74375	0.811788	0.335889
sp|P0ABQ2|GARR_ECOLI-NPEAIADVIAAGAETASTAK	1.390165	3.2993	0.868864	0.673052	1.591884	3.11165	0.63653	0.694173	1.735691	3.11165	0.927893	0.745576
sp|A8A6H0|TNAA_ECOHS-VIEPVK	2.193186	1.1218	0.93588	1.164165	1.455774	0.7865	0.905564	1.154499	0.858022	0.7865	0.694444	1.218731
sp|P13035|GLPD_ECOLI-GLVNATGPWVK	2.599021	1.2248	1.125951	1.76932	2.852368	1.2248	3.121382	1.76932	2.867364	1.3763	2.842023	1.9271

sp|P0A7V4|RS3_ECOL6-LGGAEIAR	2.238356	0.969586	2.702004	0.473981	0.769527	0.9177	3.20466	0.517353	0.687414	0.9177	1.558535	0.193533
sp|A7ZIN4|KAD_ECO24-IAQEDCR	0.451598	0.927142	0.930282	2.862762	0.391459	0.854145	1.019754	3.471479	0.257188	0.7664	1.123831	4.708042
sp|A7ZRU7|RS21_ECO24-ENEPFDVALR	1.374976	1.39405	1.185988	1.585668	1.4117	2.5026	1.384507	1.927169	1.577777	1.8152	1.433575	1.677211
sp|B5Z3U4|TIG_ECO5E-NFIDAIIK	0.300212	0.25155	1.118582	0.494055	0.436449	0.3297	0.842932	0.494055	0.436449	0.3297	1.824297	0.801455
sp|P27550|ACSA_ECOLI-LGTAEIESALVAHPK	7.482448	1.3153	0.420939	0.829716	6.583862	1.25155	0.420939	0.892789	3.496326	1.3153	0.774678	0.615517
sp|B5Z0E9|EFTS_ECO5E-GADEELVK	0.512946	0.9999	4.596837	0.787847	1.164194	0.9609	1.742258	0.787847	1.211501	0.996	1.37586	0.821909
sp|P0A7W3|RS5_ECO57-EVPAAIQK	1.773641	1.1314	1.5463	0.431988	1.190656	1.1314	1.5463	0.616737	1.052886	1.22375	1.332388	0.793181
sp|A8A750|KATG_ECOHS-ELFEGR	0.355144	1.1316	0.378395	0.442629	0.336236	1.1774	0.416156	0.468001	1.298561	1.1774	0.298447	0.498981
sp|A7ZSK4|RL22_ECO24-AAVLVK	1.031262	1.578389	2.319873	2.564777	0.32084	1.8603	5.515743	1.413991	0.658143	1.8603	1.753683	0.847673
sp|P0A910|OMPA_ECOLI-SDVLFNFNK	0.293808	1.9526	1.729678	1.597567	0.346068	0.7952	1.723729	0.621741	0.522229	0.75035	1.512162	0.523401
sp|P23843|OPPA_ECOLI-LTQPEWFGWSQEK	1.346459	0.6001	0.482815	0.181625	0.649959	0.8256	1.023144	0.181625	1.367935	1.00345	1.210294	0.300575
sp|A8A4Y7|ASSY_ECOHS-NLDITDTR	1.381665	1.073526	3.15554	0.227191	1.076173	1.154662	2.571541	0.464565	1.533751	1.09839	1.321878	1.287482
sp|P69223|IF1_ECOL6-VTVELTPYDLSK	1.28998	0.5287	0.358588	3.734043	2.395679	0.5287	0.730361	4.389097	1.626407	0.7043	0.396417	1.108332
sp|P0AB78|KBL_ECO57-GEFYQQLTNDLETAR	0.74761	1.1389	0.790994	0.702492	0.257585	1.1389	0.961685	1.238577	0.257585	1.1312	0.680942	2.128023
sp|Q19NJ4|CH602_ECOK1-GVNVLANAVK	1.456934	1.4366	0.583755	2.597234	1.035667	0.6028	0.70733	0.446627	1.342234	0.568	0.726782	0.455163
sp|P31979|NUOF_ECOLI-ALTGLSPDEIVNQVK	1.376799	1.4399	0.611592	0.613936	1.376799	1.4399	0.513445	0.840042	0.884122	1.4399	0.700745	0.309095
sp|Q19NJ4|CH602_ECOK1-FENMGAQMVK	1.841082	3.713	0.497005	0.759933	1.229874	1.1553	0.519894	1.288977	1.458292	1.1553	0.402558	1.005251
sp|P25553|ALDA_ECOLI-IPDGQAEDAR	0.212825	0.8913	0.381951	3.525403	1.785969	0.8913	0.381951	1.072265	2.12365	0.6114	0.610775	0.985431
sp|P0A9A7|FTSZ_ECOL6-EPDYLDIPAFLR	2.473916	1.3866	1.42519	0.349621	1.408189	1.218	1.217724	0.259439	1.613137	0.95915	1.399122	0.29153

sp|P31979|NUOF_ECOLI-GGAGFSTGLK	2.784944	2.6012	1.703161	0.352136	4.344987	1.2795	2.048328	0.435986	1.757217	1.24945	1.685404	0.441183
sp|P63285|CLPB_ECO57-VLNLCDK	1.542821	1.0751	8.033347	1.243333	1.546406	1.0751	8.033347	1.243333	0.409157	1.1572	1.177892	0.525088
sp|B1LPI9|G6PI_ECOSM-EVVEQEYR	7.233746	0.7188	1.240728	2.06565	5.261605	0.7188	1.266079	2.630307	0.825946	0.4317	1.680421	2.630307
sp|B7MNJ0|DEOB_ECO45-YFGTSDMEYGK	2.048722	1.978915	7.487921	0.444849	2.093041	1.562162	7.487921	0.894824	1.098042	1.5342	1.891388	0.800151
sp|P00968|CARB_ECOLI-AIEDSR	1.66034	1.7527	1.862539	3.866925	1.78798	1.7527	7.33139	3.866925	3.820077	1.7527	7.33139	3.866925
sp|P0A9P2|DLDH_ECO57-VTAVEAK	1.106378	1.0606	1.522745	1.57465	0.797665	1.26365	1.556648	1.78152	1.822491	1.2862	1.243725	1.640166
sp|A8A5E7|EFG_ECOHS-GIQEQLK	0.567462	1.03105	11.33371	0.587868	1.365078	0.5015	10.10184	0.417313	0.380841	1.103	8.187101	0.642901
sp|P00968|CARB_ECOLI-AMEIVYDEADLR	1.007446	0.8421	1.216273	1.199365	0.823358	1.1973	1.152771	1.204399	0.792335	1.2379	1.152771	1.095483
sp|P0A9B3|G3P_ECOL6-TVDGPSHK	1.080586	4.5261	2.826801	0.724077	1.080009	4.00195	2.1621	0.654079	1.073265	3.4778	2.444989	0.627159
sp|P25553|ALDA_ECOLI-AIVDSR	3.616682	1.758271	1.29999	0.97677	3.348143	1.558122	1.140078	1.579985	1.998274	1.8774	1.140078	1.799473
sp|P31979|NUOF_ECOLI-QPVWLDEYR	0.731719	0.5702	0.819474	0.059994	8.393612	1.09925	1.940095	0.614417	6.981503	0.5702	5.115135	0.614417
sp|P0AC39|ASPA_ECOL6-ISDIPEFVR	0.826288	1.755157	2.860685	0.583956	0.354022	1.9835	2.973378	1.026067	0.465503	1.7943	4.255227	1.026067
sp|A7ZJA8|SUCC_ECO24-LGADGNALFR	0.206076	0.23795	2.924211	4.335252	0.595273	0.23795	3.494464	4.54317	0.679843	0.2897	3.061894	1.516162
sp|P0AC41|SDHA_ECOLI-LDDTSSEFNTQR	1.409527	2.228762	0.563651	0.427493	1.194024	2.370706	0.546321	0.39271	1.796355	3.19015	1.183053	0.411924
sp|B1LNK7|GLYA_ECOSM-NSVPNDPK	1.763104	1.4136	1.06556	0.366075	1.549122	1.7199	1.099529	0.380261	1.495455	1.7199	1.038236	0.316616
sp|A7ZUK1|RPOB_ECO24-LGDLPTSGQIR	1.083638	1.0465	0.622049	0.374576	0.981984	0.71335	0.661817	0.449891	0.794321	0.5885	1.063248	0.374576
sp|P0A6F2|CARA_ECO57-NTEDLSSYLK	0.776383	0.8107	0.411329	1.443041	1.662918	0.8107	0.707857	0.902676	1.612172	0.8107	0.707857	0.467906
sp|B1IQH7|YAEH_ECOLC-ILDDLR	0.974507	0.82453	1.428584	0.209024	1.481878	0.5507	1.647853	0.119503	1.749477	0.5701	1.732515	0.222577
sp|P0AG61|RS14_ECO57-AIISDVNASDEDR	1.447546	0.89645	1.005955	0.881878	1.447546	0.89645	1.005955	0.881878	1.443167	0.8337	0.986821	0.566051

sp|Q8FB69|PUR2_ECOL6-FGDPETQPIMLR	1.225353	2.7749	1.085042	0.952781	2.018046	2.634	1.060614	0.705298	2.480182	2.7749	1.060614	0.506809
sp|P0AGF0|SUCD_ECOL6-MVGGVTPGK	0.999412	1.41745	0.958449	0.432288	0.749881	0.8943	0.383578	0.511579	0.914483	0.9903	0.659195	0.51778
sp|B7MZ75|ENO_ECO81-VLGDK	2.231844	0.4052	0.58321	0.920009	1.031796	0.4516	0.730476	0.815179	1.1946	0.58975	0.771448	0.64913
sp|A7ZV12|CH60_ECO24-AMEAPLR	0.890598	1.178748	1.36816	1.514474	0.890598	1.342847	1.452059	1.43155	0.590703	1.7033	0.542708	1.863168
sp|A1A9Q9|NQOR_ECOK1-YQGEYVAGLAVK	0.314458	0.806463	0.873487	4.306694	0.413571	0.9641	0.598615	3.135054	2.518026	0.7427	1.092484	3.135054
sp|B7MZ75|ENO_ECO81-AAGYELGK	0.279542	1.2426	0.675394	2.069198	0.956339	1.2708	0.783586	1.756381	0.956339	1.10555	0.844126	0.883852
sp|P0AFH9|OSMY_ECOL6-LLADDIVPSR	0.779029	0.9957	0.722419	1.425651	0.763385	1.0239	0.7592	1.254774	0.90891	0.9957	1.311983	1.022216
sp|P69784|PTGA_ECOL6-IVGDGIAIKPTGNK	0.865024	0.5858	1.514919	0.16472	0.99806	0.6474	1.83106	0.28764	1.360669	0.75105	1.83106	0.216266
sp|P33599|NUOCD_ECOLI-IGGVAHDLPR	1.072168	0.453	1.525213	32.41806	1.091736	0.453	2.079844	6.099936	3.314253	0.453	1.990722	2.688881
sp|B7LF91|GCST_ECO55-DDLSMIAVQGPNAQAK	1.361009	0.81045	0.777532	0.36535	0.992703	1.1226	0.675244	0.36535	2.988794	0.99925	0.787232	0.60753
sp|B7LA23|GLPK_ECO55-ATLESIAYQTR	0.957358	1.273175	1.590727	1.338417	0.882837	1.71065	1.164893	1.292826	0.802299	1.3871	1.018548	1.055974
sp|A7ZV12|CH60_ECO24-LAGGVAVIK	0.260759	0.6154	1.837737	0.823462	0.38553	0.9401	2.180007	0.977911	0.44538	0.9401	1.984245	0.708145
sp|C4ZPU9|RS20_ECOBW-VYAAIEAGDK	2.532035	1.04585	0.089474	2.753238	7.925252	1.08595	0.308674	3.510075	1.495899	0.9286	0.692215	8.159788
sp|P0A6F2|CARA_ECO57-SALLVLEDGTQFHGR	3.095186	0.765672	1.293818	0.303875	2.500271	0.4637	1.01515	0.085958	1.958021	0.704	1.526912	0.707071
sp|P0AGF0|SUCD_ECOL6-SLADIGEALK	0.398714	1.3651	0.993867	0.387351	0.733043	1.4712	0.923265	0.853016	0.695555	0.99	0.750991	0.623871
sp|P0AG68|RS1_ECOL6-SESAIPAEQFK	0.352273	0.78255	0.552469	0.457866	0.557298	0.3748	0.386224	0.42546	0.818046	0.7658	0.853311	0.515812
sp|A7ZTU4|ATPB_ECO24-GVQSILQR	0.72547	0.715522	1.059774	0.778791	1.102692	0.5635	0.78453	0.904838	0.857306	0.61135	0.805079	0.668479
sp|P63285|CLPB_ECO57-YTIDLTER	1.604348	1.589453	0.622488	1.861279	2.06903	1.501279	0.395322	1.366434	1.397169	2.0149	0.485117	1.296341
sp|A1AGI5|RL17_ECOK1-HEIIK	0.809304	0.689147	0.857078	0.173649	0.714363	0.701125	0.521305	0.115484	0.657932	0.1978	0.78144	0.202971

sp|A1AGI6|RPOA_ECOK1-LENWPPASIADE	1.807059	1.079935	1.554461	0.704289	1.482773	0.8963	1.275177	0.704289	1.482773	1.141	1.275177	0.697914
sp|P0A910|OMPA_ECOLI-LGYPITDDLDIYTR	1.367654	0.9591	1.32605	0.42509	1.461631	0.8858	1.279411	0.35038	1.373258	0.96655	1.220806	0.284253
sp|B1LNK7|GLYA_ECOSM-VMQAQGSQLTNK	1.174431	1.68775	0.978303	0.750262	2.403068	0.67	0.960522	0.776639	1.531638	0.6453	0.955693	0.613208
sp|P0A6Z5|HTPG_ECO57-EGEDEFLDDWR	2.712204	0.9814	1.347922	1.431487	3.487894	0.9814	0.987439	1.18314	2.953667	0.9814	0.76593	0.775194
sp|B1LNK7|GLYA_ECOSM-TLAGPR	1.642547	0.78249	2.547917	2.304881	1.642547	0.699798	1.963634	2.437406	7.075308	0.57975	1.248452	2.372985
sp|C4ZZ44|ILVC_ECOBW-AIPEGAVDNGQLR	1.01623	1.36759	0.781428	2.403194	1.170936	1.249248	0.630351	3.979158	1.11487	0.58	0.44067	2.886285
sp|P68206|YJBJ_ECOLI-LTDDDMTIIEGK	2.098684	0.2505	0.748778	1.804488	3.28951	2.68655	0.181345	1.868035	3.28951	2.101	0.065446	2.025475
sp|P17169|GLMS_ECOLI-GDQYPIALEGALK	0.896756	0.2157	0.632191	7.925315	1.555573	0.6036	0.880573	7.023602	1.544292	0.9036	1.05811	1.69755
sp|P0AGF0|SUCD_ECOL6-GGTTHLGLPVFNTVR	1.359491	0.9027	0.823071	2.754726	1.237414	0.9027	1.015117	1.592426	1.303273	0.752	0.97965	1.218339
sp|B5YTN8|RL2_ECO5E-GKPFAPLLEK	1.054421	0.64895	0.853329	4.372004	1.507414	0.64895	1.087906	4.886574	3.357234	0.64895	0.38106	5.507083
sp|B7UJN9|NUSB_ECO27-DVDVLYFR	0.633989	0.71205	1.553638	3.711812	0.678466	0.759	0.928508	2.626456	1.466748	0.759	1.264589	2.626456
sp|P00509|AAT_ECOLI-NYLGIDGIPEFGR	1.215778	1.5289	0.848006	1.618085	1.040739	1.74035	0.920543	1.279723	0.974748	1.39055	0.843322	1.200804
sp|A7ZJ31|SYL_ECO24-ITVPVDATEEQVR	0.841565	1.2906	0.845529	0.689157	1.01093	0.9831	0.850532	0.587696	0.520209	1.4053	0.978028	0.645364
sp|B7UIL4|RS2_ECO27-SQDLASQAEESFVEAE	1.530131	1.7128	0.798664	1.216079	1.432442	0.8608	0.971273	1.242848	1.442967	1.4016	0.841964	1.21529
sp|B1X883|RL25_ECODH-LQHIDFVR	0.327547	0.517255	1.269234	0.608079	0.229305	0.1139	0.960392	0.110329	0.229305	0.1139	0.861771	0.132014
sp|P63285|CLPB_ECO57-LDMLNEELSDK	3.472783	1.177	1.309601	1.379228	0.748317	1.1834	0.854154	0.641464	0.684839	1.19955	0.627181	0.532793
sp|P0AB78|KBL_ECO57-ALGGASGGYTAAR	3.956871	0.3329	0.455391	4.210901	0.942363	0.3329	0.169655	2.644621	1.57479	0.4837	0.160094	3.37905
sp|A1AID4|CAPP_ECOK1-GEAASNPEVIAR	17.72497	0.8897	1.111614	1.194958	14.27817	0.88765	1.323776	0.905633	13.908	0.88765	0.819105	0.905633
sp|A7ZTP0|IBPB_ECO24-GTPEQPK	0.745782	1.5147	3.665451	0.336415	1.345564	1.5147	11.76308	0.952078	1.36881	3.59365	16.03763	1.100595

sp|B7MNJ0|DEOB_ECO45-ETFADIGQTLAK	1.375883	4.24815	0.294603	1.624448	2.386545	4.24815	0.320649	2.045404	2.401453	4.24815	0.320649	0.953033
sp|B7MIX0|RL1_ECO45-VDFDADK	0.566746	0.596194	0.380775	0.683396	0.619868	0.2721	0.380775	0.683396	0.394511	0.2721	0.992783	0.683396
sp|A1AGI6|RPOA_ECOK1-IHSEEDERPIGR	3.000651	0.651361	0.893957	1.204796	2.862288	0.431	0.597015	1.360189	2.736123	0.4428	0.608321	1.187318
sp|A8A5E7|EFG_ECOHS-DVTTGDTLCDPDAPIILER	0.663382	0.5991	0.726179	0.688987	0.663382	0.6627	0.877001	0.688987	0.644782	0.67115	0.877001	0.680657
sp|P63285|CLPB_ECO57-IPELEK	1.517212	0.5068	1.307223	18.52224	1.517212	0.5068	1.418437	22.41439	1.517212	0.5068	1.418437	4.852952
sp|P00579|RPOD_ECOLI-AQYVVTR	0.665164	3.6344	0.976356	0.596496	0.428012	3.6344	1.30253	0.811114	0.428012	3.6344	0.492956	0.811114
sp|B1LNH0|ISPG_ECOSM-INPGNIGNEER	2.660666	0.4566	1.177698	3.298256	3.151635	0.5373	1.739529	3.07563	2.397354	0.5373	1.739529	3.07563
sp|P77395|CNOX_ECOLI-DLTAADGQTR	1.34143	0.3577	0.763146	0.995551	1.34143	0.3577	0.763146	0.995551	1.461654	0.4953	3.327743	2.346049
sp|A7ZSL4|EFTU1_ECO24-TVGAGVVAK	0.833084	0.8173	0.578065	0.794597	0.58067	0.5304	0.924024	1.710164	0.531429	0.6924	1.07157	0.695368
sp|P0A9X5|MREB_ECOL6-GQGIVLNEPSVVAIR	1.17873	0.782	1.694011	0.220752	1.729034	0.782	1.694011	0.742407	2.100197	0.782	1.459609	0.773842
sp|A7ZTU4|ATPB_ECO24-VGLFGGAGVGK	0.907751	0.9688	0.504543	0.348814	0.827873	0.9688	0.271156	0.772307	0.775915	0.9045	0.184966	0.417226
sp|P36683|ACNB_ECOLI-TDVLIDEVR	2.553908	1.083678	1.131198	1.858991	4.086689	0.726082	0.340116	2.145675	1.176091	1.1106	0.231512	2.145675
sp|P10384|FADL_ECOLI-GNYSSDLNR	1.647994	1.203624	0.465106	1.11088	2.252512	1.39255	0.804335	0.316449	1.906848	1.39255	0.773204	0.494551
sp|P36683|ACNB_ECOLI-LLDAHK	0.722824	1.334197	0.71545	1.925994	0.631939	1.268498	0.893913	0.372793	0.757191	1.46174	0.792566	0.372793
sp|P0AC34|FUMA_ECOL6-VWTGGGDEAALAR	3.579058	1.012982	3.801366	0.449674	6.084611	0.4021	3.801366	0.617644	6.084611	0.4021	1.974787	0.790742
sp|P0AFF8|NUSA_ECO57-GAQLFVTR	4.315846	0.943846	5.538637	2.152946	3.634214	0.7067	1.601106	2.855301	3.744901	0.7067	0.916998	2.652522
sp|A7ZP73|ARNA_ECO24-GIPVYAPDDVNHPLWVER	0.760925	1.4385	1.363763	1.178938	0.98042	1.4421	1.363763	1.178938	1.030743	1.4421	1.363763	1.417731
sp|P0AFG5|ODO1_ECO57-IEQLYPFPHK	0.582357	2.2432	2.336701	0.341273	0.36904	0.92185	1.142408	0.38479	0.471441	1.0686	1.236167	0.357221
sp|P0A9M8|PTA_ECOLI-NTNITGVIVNK	0.271463	2.2815	0.151093	1.158071	0.297336	2.2815	0.179019	1.224438	1.271949	1.5433	0.546565	1.224438

sp|P0ABK6|CYSK_ECO57-ALGANLVLTEGAK	1.40006	1.2931	1.831595	0.313962	1.959838	1.0087	1.322653	0.34609	2.164434	1.23565	2.006121	0.34609
sp|P0AC41|SDHA_ECOLI-LPGILELSR	0.917945	0.361	0.708484	1.016265	0.506559	0.7187	1.606684	0.652189	0.506559	0.53985	2.182316	1.090577
sp|P0ACG0|HNS_ECO57-ILNNIR	2.099018	0.7732	0.421078	0.437569	0.596831	0.7732	0.57845	0.437569	0.618658	0.7732	0.57845	0.298615
sp|P23869|PPIB_ECOLI-APETVK	0.312727	6.0672	5.688514	0.428268	0.508292	6.0672	4.819869	2.81441	0.752666	6.0672	4.750054	0.434838
sp|P0A9K5|PHOL_ECO57-EITLEPADNAR	1.473769	1.673725	1.136672	0.109286	1.60178	1.366459	1.376526	0.115287	1.306622	1.6242	1.213968	0.193173
sp|P0A6Z5|HTPG_ECO57-ALSNPDLYEGDGELR	0.783955	1.9811	0.700415	1.220569	0.783955	1.9811	0.700415	1.220569	0.576185	1.7219	0.700415	0.92048
sp|A7ZIN4|KAD_ECO24-YGIPQISTGDMLR	0.970163	0.2642	2.478669	6.040113	0.295245	0.3823	1.308794	6.382748	0.342502	0.5004	0.984263	3.519423
sp|P0AG68|RS1_ECOL6-HPSEIVNVGDEITVK	0.649405	0.5297	0.8259	4.104338	0.62951	1.4529	0.766551	1.380562	0.668662	1.3794	0.637851	0.735991
sp|P0AG68|RS1_ECOL6-ANPWQQFAETHNK	0.750006	2.3182	0.810566	1.369402	2.75212	2.3182	0.792422	1.277348	1.596219	2.3182	0.409241	1.51829
sp|P0A6Y9|DNAK_ECOL6-NQGDHLLHSTR	1.312757	1.20785	1.216086	0.547434	1.71055	1.0041	1.145588	0.678215	1.71055	1.0041	1.218731	0.60959
sp|P0AEZ3|MIND_ECOLI-ASNQGEPVILDINADAGK	0.703471	1.7286	2.001939	0.222559	1.450337	1.6028	1.653436	0.225314	1.692949	1.7286	1.176049	0.213431
sp|P0AF93|RIDA_ECOLI-TGEVPADVAAQAR	1.728142	1.318	0.915437	1.414121	1.277815	1.318	0.656654	1.329492	1.019824	1.3788	0.756703	1.168742
sp|P0ACD5|ISCU_ECOL6-SLDEAQAIK	0.928698	0.85355	1.026015	0.414855	1.762513	0.85355	1.026015	0.60603	2.040842	0.64395	0.673492	0.475381
sp|P69832|PTKC_ECO57-FSADDIQR	1.076837	0.7843	0.979942	0.445743	1.213169	0.6841	0.838261	0.589898	1.190036	0.7843	0.895076	0.956468
sp|P0A6Z5|HTPG_ECO57-SSPHLELLR	0.460626	1.295691	1.081604	0.465009	0.59774	0.893833	2.215193	0.465009	0.609325	1.035871	1.527383	0.465009
sp|B1XB97|HSLU_ECODH-HIIGQDNAK	0.319921	6.3364	1.19483	7.466209	0.232067	3.9474	1.51576	4.003228	0.572423	0.8874	2.118398	0.523355
sp|P08839|PT1_ECOLI-AGETFGEEK	2.543821	1.9494	0.750845	0.998352	1.603276	1.3979	0.296165	0.602012	3.521133	1.3979	1.228239	0.568717
sp|B7UPE0|RL10_ECO27-AAAFEGELIPASQIDR	0.61165	2.3674	0.889843	0.154464	0.784301	2.3674	0.935607	0.782275	0.735352	1.3339	0.90048	1.576679
sp|B1IUY2|SYA_ECOLC-IISESGTAAGVR	3.523728	0.3391	0.988002	0.393647	2.278369	0.735	0.988002	0.444292	2.98515	0.55785	1.70485	0.419146

sp|P63285|CLPB_ECO57-WTGIPVSR	1.26349	0.4937	1.709541	1.001819	1.191185	0.7878	1.013263	0.526355	1.470103	0.7878	0.674908	0.612682
sp|P0A9B3|G3P_ECOL6-AATYEQIK	1.133105	0.7477	1.153241	0.936441	1.133105	0.87835	1.116762	0.900815	1.024026	1.00875	1.32345	0.758191
sp|P27302|TKT1_ECOLI-QNLAQQER	1.801672	1.490225	0.84581	0.710334	2.307628	1.4943	1.546145	0.620105	2.307628	1.4943	1.709573	0.522857
sp|P27550|ACSA_ECOLI-NTSFAPGNVSIK	1.284224	1.5618	0.778127	6.862177	0.510803	3.08595	0.566628	0.940309	0.281518	2.4721	1.138884	0.297653
sp|A7ZSL0|RS10_ECO24-LIDQATAEIVETAK	3.143795	0.9685	0.267565	1.148451	1.977563	3.8006	0.267565	1.214224	0.848973	3.8006	0.543435	0.414887
sp|P0AE10|AHPC_ECO57-NGEFIEITEK	0.990958	1.4221	0.823673	0.307971	1.295842	1.2173	0.8745	0.36005	1.295276	1.2592	0.879332	0.338612
sp|P0AG32|RHO_ECO57-MNLTELK	2.931116	0.3699	1.994918	0.833471	3.401702	0.3699	1.773292	0.801256	1.588313	0.3699	1.773292	0.935305
sp|A7ZSD0|MDH_ECO24-SNTFVAELK	0.801249	0.59325	1.010106	0.955441	0.534866	0.6048	1.467482	1.204393	0.534866	0.76675	1.179232	0.719637
sp|B7UPE0|RL10_ECO27-QAIVAEVSEVAK	0.438978	0.8035	0.545573	0.276013	1.175586	0.9551	0.169941	0.228796	1.297315	0.7142	0.467742	0.233526
sp|A7ZJA8|SUCC_ECO24-AFAENWLGK	0.313748	1.69955	2.179033	0.581835	0.69073	1.40615	0.864522	0.757859	0.732155	1.40615	0.205852	0.590661
sp|B7NMH9|NFUA_ECO7I-LLANQEEGTQIR	1.981231	1.318045	1.278432	0.985774	2.812012	0.9745	1.075435	1.319741	3.527887	0.9915	0.957694	0.476298
sp|P0AFG5|ODO1_ECO57-VYYDLLEQR	0.405868	0.9603	0.782843	0.405269	0.566653	1.66265	0.525491	1.006366	0.566653	0.9603	0.525491	0.783787
sp|P0A9P2|DLDH_ECO57-GISYETATFPWAASGR	1.215384	1.36425	0.585972	0.993788	0.993484	1.06025	0.60425	1.00639	0.974251	0.9164	0.575404	1.228866
sp|P09546|PUTA_ECOLI-GIYEGPGISIK	2.358587	1.5331	2.015804	1.5503	0.763179	1.24195	1.082743	0.884606	1.244752	1.1516	1.113011	0.926795
sp|P0ADB9|ECNB_ECO57-GVGEDISDGGNAISGAATK	1.762885	1.336	1.400287	1.266011	1.116482	1.21755	1.349159	1.251567	1.159208	1.21755	1.349159	0.980691
sp|A1AIG0|RPOC_ECOK1-VADLFEAR	1.80523	0.732513	0.615405	1.064579	1.80523	0.72444	0.761107	1.171778	1.80523	0.455	0.500034	0.429709
sp|B7LA23|GLPK_ECO55-VHVTDYTNASR	0.273978	1.8151	0.894017	0.711136	0.273978	1.8151	0.736808	0.441178	0.313397	1.5775	1.43117	0.44089
sp|A8A0Q4|IHFA_ECOHS-AEMSEYLFDK	0.789411	1.2229	1.049114	0.678537	0.985372	1.3033	1.044908	0.716729	1.102779	1.2631	0.985947	0.708726
sp|P27298|OPDA_ECOLI-LVAVVPSPSWGR	1.081188	0.6465	0.634652	1.209914	1.622441	0.6465	0.49015	0.879125	1.020616	0.6465	0.49015	0.759872

sp|B7LA23|GLPK_ECO55-MLEVLDIPR	0.593136	0.7484	1.101772	0.334367	1.040257	0.9042	0.860813	0.541154	0.935678	0.949	0.916178	0.179438
sp|P0A9Y0|CSPA_ECOL6-GFGFITPDDGSK	0.939617	1.7947	0.518597	1.000238	1.103428	1.7947	0.518597	0.296636	0.775807	1.69835	2.04529	0.473289
sp|B7M1N4|RL3_ECO8A-TQDATHGNSLSHR	0.758587	1.242235	0.731124	0.327377	0.501084	1.149832	0.705131	0.4682	0.867204	0.2129	0.796429	0.563063
sp|P63285|CLPB_ECO57-AGLADPNRPIGSFLFLGPTGVGK	0.270913	0.29075	4.150681	0.724417	0.712639	0.3867	3.043563	0.721087	0.780807	0.3867	1.967017	0.543046
sp|B5Z3U4|TIG_ECO5E-SQAIEGLVK	1.418897	0.6375	0.650478	0.562188	2.005888	1.05715	0.650478	0.687849	1.93618	1.05715	0.648891	0.585266
sp|B5Z0E9|EFTS_ECO5E-AQFEEER	1.886569	1.3397	1.202278	2.115389	1.542053	1.02425	1.019949	1.515955	1.450448	1.1334	1.002431	1.628901
sp|A7ZTP0|IBPB_ECO24-QWIGFDK	0.700606	0.94795	1.182598	0.364695	0.754051	0.8902	0.572372	0.534232	0.82008	0.77735	0.511553	0.475017
sp|P0A9B3|G3P_ECOL6-GASQNIIPSSTGAAK	1.190623	0.6248	0.965868	1.160493	1.329128	0.6406	0.862245	1.269991	1.392262	0.7854	0.960021	0.907958
sp|B7NH52|DEOD_ECOLU-IALESVLLGDKE	1.055693	1.7776	0.921639	0.266386	0.571664	1.7776	0.883984	1.4267	0.547717	1.1639	1.314486	0.782854
sp|A8A466|PGK_ECOHS-SLYEADLVDEAK	1.945324	1.0411	0.962563	1.519075	1.808782	0.9652	1.003625	1.223032	1.725984	0.9652	0.931422	1.467499
sp|P0A9B3|G3P_ECOL6-VLPELNGK	1.771509	1.2128	0.081404	2.066852	1.494233	1.0546	0.13182	0.894197	2.292428	0.67525	0.500744	1.205937
sp|P0AB72|ALF_ECO57-DSVSYGVVK	0.854186	1.0294	3.314185	0.555159	1.733881	1.0294	0.693898	0.569336	0.564575	0.8513	1.249017	0.393204
sp|A8A2B9|AIS_ECOHS-VYLDGEFVNH	0.405226	3.786471	1.066201	0.750563	0.513752	3.891916	1.066201	1.088832	0.462671	5.0535	1.066201	1.125447
sp|A7ZJA8|SUCC_ECO24-IGAGPWVVK	0.315703	5.07295	1.110175	0.210028	1.727064	0.5428	1.131545	0.475427	1.727064	0.967	1.00078	0.365686
sp|P0AAI6|FABF_ECOL6-TIFGEAASR	0.54911	1.337266	1.155476	2.425673	0.701978	1.343819	1.143977	1.380868	0.544146	1.301518	1.413465	1.363058
sp|P0AEK2|FABG_ECOLI-AGILAQVPAGR	0.942077	1.3642	1.200498	0.86838	1.701554	0.93665	1.152716	0.881653	1.50899	0.8346	2.002115	1.051109
sp|P0A8N4|SYK1_ECOL6-VFEINR	1.124711	1.068613	1.083106	0.056681	2.255014	0.5551	0.755737	0.795929	1.817165	0.5569	0.98864	0.59488
sp|P0A6Y9|DNAK_ECOL6-IINEPTAAALAYGLDK	0.995647	1.7557	1.055666	0.35442	0.881187	1.7491	0.96091	0.229881	0.773694	1.5041	1.344422	0.33872
sp|P0AES6|GYRB_ECOLI-GLLEEDAFIER	0.993986	2.9762	1.269025	2.13592	1.088975	1.7058	0.476627	1.478364	1.349803	0.7546	0.565002	1.760093

sp|B7MZ75|ENO_ECO81-IQLVGDDLFVTNTK	0.746768	0.46795	0.55375	1.67975	0.765265	0.4943	0.531966	0.620973	0.828171	0.51265	0.7034	0.637914
sp|A7ZNR4|GATZ_ECO24-TGFNDSLLDIR	1.039336	1.034113	0.837033	1.289137	0.875556	0.89225	1.303937	1.109884	0.525179	1.26915	0.872154	0.965876
sp|B7M1N4|RL3_ECO8A-AIQVTTGAK	0.562748	6.9224	0.503797	0.368315	0.562748	0.45885	0.87924	0.453383	0.66681	0.6423	0.653871	0.453383
sp|P25553|ALDA_ECOLI-LGEAMQAVQFGNPAER	0.475384	1.3366	0.823671	2.854763	0.26551	0.9758	1.242979	3.545912	0.366729	0.8886	1.242979	1.930873
sp|A8A2C2|ARNA_ECOHS-GIPVYAPDNVNHPLWVER	0.760925	1.4385	1.363763	1.178938	0.98042	1.1731	1.293572	1.178938	1.471433	1.1731	1.293572	1.106398
sp|A7ZV12|CH60_ECO24-GQNEDQNVGIK	1.951026	0.68055	0.933944	1.329809	1.953556	0.9326	0.790324	1.313032	1.529761	0.78425	0.864426	1.323201
sp|A7ZNR4|GATZ_ECO24-IQSGELSAIPHQLIMDK	0.438847	2.4838	0.206176	0.6298	0.482202	1.29995	0.623839	0.232406	0.482202	1.4184	0.693305	0.210555
sp|A7ZSL4|EFTU1_ECO24-REEIER	2.312817	0.3539	0.688125	3.561489	4.368525	0.4707	0.566416	2.766305	2.812397	0.57015	0.566416	2.541738
sp|A7ZQP6|FUCI_ECO24-YGEDENNK	1.462191	1.22965	1.532865	0.469894	1.828225	1.6192	1.396912	0.376819	1.922444	1.6192	1.404983	0.423252
sp|P00968|CARB_ECOLI-ALLSVR	3.494817	3.909782	0.209802	1.210756	8.920768	5.4301	0.270503	1.019102	4.679664	5.4301	0.270503	1.019102
sp|Q19NJ4|CH602_ECOK1-SFGAPTITK	0.983588	0.94875	0.667319	0.724552	0.942353	0.9286	1.182062	0.647997	0.908812	1.1508	0.843467	0.635471
sp|P0ACG0|HNS_ECO57-LEVVVNER	0.702561	0.922	0.392652	0.446521	0.668538	1.3869	0.646036	0.735241	0.747338	1.41295	0.540437	0.956721
sp|P69784|PTGA_ECOL6-MVAPVDGTIGK	0.662526	0.85225	3.285203	1.950522	0.849285	0.9183	1.305741	1.110678	0.809224	0.9183	2.137726	1.485481
sp|P45523|FKBA_ECOLI-LDGVIPGWTEGLK	0.123898	1.0435	0.289137	0.386342	0.645905	0.5375	0.550598	0.338915	0.465538	0.7237	0.355458	0.264389
sp|P0AG68|RS1_ECOL6-GAIVTGK	8.554373	2.2455	1.092622	1.38283	2.958399	1.4162	0.958315	1.661144	1.444797	1.5871	0.816844	1.603235
sp|P0A6Y9|DNAK_ECOL6-NTTIPTK	0.912089	0.5163	1.844725	1.787472	0.236142	0.8488	1.12183	1.157664	0.409997	0.7538	1.145858	0.721696
sp|A7ZSK4|RL22_ECO24-VSQALDILTYTNK	0.574484	0.474037	0.685669	2.772589	3.829663	0.1749	0.592786	1.873454	4.176813	0.25315	0.378983	1.873454
sp|A7ZTU4|ATPB_ECO24-GEIGEEER	7.04003	1.7545	0.804949	2.071044	3.48154	1.5089	1.113916	1.865039	3.075558	1.6796	0.619727	2.360925
sp|A1AGK1|RL16_ECOK1-GLAQGTDVSFGSFGLK	0.450643	1.3822	0.479205	2.223073	0.789509	1.3822	1.66494	2.790583	0.842936	1.3822	1.66494	2.790583

sp|P0AFG9|ODP1_ECO57-GAITIATR	0.939367	1.3795	2.375724	0.159345	0.895733	1.3795	1.923113	0.159345	0.685287	0.97565	4.011684	0.56441
sp|P31554|LPTD_ECOLI-EAPGQPEPVR	1.128683	0.9716	0.378378	1.545302	1.190055	0.96825	0.071175	1.562459	0.637045	0.9649	0.130436	1.562459
sp|A7ZHT6|SYP_ECO24-AQGIEVLLDDR	0.433879	1.996784	1.887362	0.920371	0.19193	1.9416	2.666765	2.143655	0.40056	1.0731	2.820698	0.898656
sp|B7UHB4|CSRA_ECO27-EVSVHR	0.317644	2.502742	0.966543	0.14749	0.245327	3.8696	0.29602	0.133751	1.04343	3.8696	0.310569	0.133751
sp|B7LA26|RRAA_ECO55-ALVDAELAR	0.66073	1.3945	1.449249	1.093687	0.75097	1.4423	2.122946	1.156665	0.801533	1.8296	2.153013	0.604667
sp|A7ZTP0|IBPB_ECO24-SDDNHYR	0.707358	2.7428	0.957887	0.454042	1.391378	3.39705	0.96471	0.700562	1.681434	3.39705	1.087399	0.645074
sp|A7ZSJ0|RL15_ECO24-AAIEAAGGK	1.193425	3.2195	14.9409	0.14708	1.973263	1.2414	5.440233	1.137305	1.853166	0.91435	2.49424	0.914351
sp|P09394|GLPQ_ECOLI-AGVNGLFTDFPDK	1.13456	1.0274	0.781469	0.365054	0.799345	0.8918	0.929228	0.633559	0.733489	1.0131	0.615275	0.474037
sp|P37330|MASZ_ECOLI-ELGYLVPQPER	0.385079	3.328328	0.465481	0.84062	0.44814	5.1311	0.638094	1.033966	0.405301	5.1311	0.644748	0.692043
sp|P0A9Y7|CSPC_ECOL6-GPAAVNVTAI	1.645868	0.9067	1.304767	0.812292	1.651571	0.7715	1.264018	0.909963	1.660695	1.07325	1.161689	0.637701
sp|P0AG68|RS1_ECOL6-ISLGVK	0.949583	0.2576	1.29471	0.28969	0.828426	0.6881	1.108849	0.457238	0.467526	1.21285	1.360539	0.457238
sp|B1IT06|RS6_ECOLC-HAVTEASPMVK	0.296359	0.3426	0.8476	2.038818	0.307993	0.60535	0.493092	0.962001	0.350668	0.43125	0.823815	1.067556
sp|B5Z3U4|TIG_ECO5E-NVALEEQAVEAVLAK	0.970547	0.51445	1.513903	0.127384	0.93591	0.5906	1.070113	0.172515	0.928959	0.5906	1.076644	0.184968
sp|P0A7W3|RS5_ECO57-SVEEILGK	0.402663	0.6607	4.802365	2.039739	0.564286	0.4205	1.189589	0.340247	0.488424	0.6607	0.866543	0.612147
sp|A1AIG0|RPOC_ECOK1-FTDMIDGQTITR	0.888555	2.4472	0.958241	1.532324	0.367768	3.61305	2.229249	1.898107	0.370659	3.61305	2.479573	3.28171
sp|P0A9B0|FUR_ECOL6-VIEFSDDSIEAR	1.537675	0.582702	1.893834	1.237872	2.109648	0.6222	1.148831	0.929319	1.433481	0.6222	1.239146	1.763994
sp|A7ZUM3|PUR9_ECO24-VPGLDFK	1.922831	0.60735	3.518519	1.869504	0.370455	0.5702	2.182328	1.681069	0.840709	0.5702	1.677241	2.158259
sp|B5Z3U4|TIG_ECO5E-INPAGAPTYVPGEYK	1.415752	0.7654	0.64824	0.49747	1.332544	0.8642	0.589425	0.476511	1.536455	0.8642	0.830086	0.40365
sp|B7M1N3|RL4_ECO8A-AEVTGSGK	1.196726	1.058	0.908525	0.537447	1.350308	1.77165	0.904381	0.514	1.977843	1.3859	0.888985	0.492757

sp|P63285|CLPB_ECO57-GYEIHISDEALK	1.620989	1.6043	1.016665	2.882105	1.391928	1.6043	1.2176	1.357626	1.592111	1.6043	0.988303	2.401463
sp|A7ZUJ6|RL11_ECO24-TPPAAVLLK	1.388149	0.93693	3.985657	1.284809	0.466593	1.6631	3.664235	1.617133	0.466593	0.4237	1.237678	1.549571
sp|B5YTN8|RL2_ECO5E-DGAYVTLR	1.212529	2.4972	1.352056	0.255794	1.649984	2.4972	1.674417	0.344159	2.479933	2.4972	1.674417	0.255794
sp|P45523|FKBA_ECOLI-DAADNEAK	3.502037	0.8856	0.8576	6.162159	2.05472	1.0078	2.466085	6.162159	1.36064	1.16175	1.888862	1.309115
sp|P36683|ACNB_ECOLI-ILEIEGLPDLK	0.886128	1.616088	1.911018	0.304172	1.10112	1.3502	0.979154	0.237022	1.19509	1.3502	1.280371	0.31333
sp|K0BE10|TAL_ECO1E-AAEQLEK	0.461656	0.732	0.607573	0.771121	3.523888	0.68645	1.357933	0.708149	3.164423	0.6148	1.67884	2.396503
sp|B5Z3U4|TIG_ECO5E-ASDFVLAMGQGR	0.764005	2.7542	0.668913	5.422595	0.791667	2.5274	0.720914	3.484579	0.791667	2.0113	0.694913	1.031414
sp|K0BE10|TAL_ECO1E-ITESEFLWQHNQDPMAVDK	1.334012	1.1288	2.533357	1.049871	1.430024	1.1288	2.367559	1.069133	1.615665	1.25475	1.783555	1.069133
sp|B7MZ75|ENO_ECO81-EIIDSR	8.228667	0.7306	0.271705	3.197173	5.081	0.7306	0.258572	7.511406	5.081	0.7306	0.258572	7.511406
sp|P0ACG2|STPA_ECO57-TWTGQGR	2.057499	3.6371	0.133156	1.173792	2.755826	3.6371	0.188472	1.473467	3.111626	3.6371	0.192032	1.179102
sp|P0AG19|PURE_ECO57-AQTDEVLENPDPR	1.199032	1.0292	0.892233	1.410195	0.482628	1.5729	0.930424	1.547806	0.592607	1.09375	1.0825	2.439294
sp|A8A750|KATG_ECOHS-AVAEVYASSDAHEK	1.784436	3.6286	1.594696	0.750957	2.123302	2.3178	1.044023	0.509547	0.605117	1.007	1.328631	0.500721
sp|P08839|PT1_ECOLI-TEFLFMDR	0.473407	2.501942	0.385805	4.542495	0.304914	3.9593	0.598244	2.527696	0.354058	2.1627	0.663414	0.486181
sp|A7ZST1|PCKA_ECO24-NTYASPEQWQEK	1.323143	1.5451	0.135851	0.779378	1.014958	1.5451	0.27083	0.587438	1.887856	1.1467	0.326944	1.072084
sp|A8A6H0|TNAA_ECOHS-YDIPVVMDSAR	1.669905	1.457028	0.87414	0.749551	0.735286	1.5486	1.184885	1.091249	1.415017	1.5486	0.994877	0.753777
sp|A7ZJA8|SUCC_ECO24-GLTDAAQQVVAAVEGK	0.695404	1.5299	5.709046	0.542806	0.569508	1.7872	5.709046	0.432734	0.849729	1.5299	5.62199	0.150201
sp|P62593|BLAT_ECOLX-VGYIELDLNSGK	14.59337	0.42215	0.753966	2.515286	11.93641	0.4462	0.850631	2.220888	9.40328	0.58365	0.500176	1.513989
sp|P0ABH7|CISY_ECOLI-ITFIDGDEGILLHR	1.544744	0.598197	0.480588	1.344123	0.836222	0.39465	0.635337	1.237861	0.80831	0.5146	0.63073	1.367855
sp|P0A9S3|GATD_ECOLI-IASSGLCGSDLPR	2.184951	2.2261	1.715397	1.20732	1.599386	2.2972	2.422895	0.808007	1.383652	2.2972	1.475619	0.480351

sp|P0AFG9|ODP1_ECO57-VQLLGSGSILR	1.372257	1.032989	1.017487	0.185754	1.309563	0.7835	0.75921	0.487738	1.309563	0.7835	0.75921	0.487738
sp|P0A6Z5|HTPG_ECO57-LADEVDESAK	0.459271	2.10965	1.358179	0.993619	0.454255	2.3908	0.681346	1.623655	0.567618	1.1148	0.688471	0.917338
sp|P0AEZ3|MIND_ECOLI-LVGVIPEDQSVLR	0.94754	0.60785	0.627685	7.065427	0.94754	0.60785	0.666694	7.065427	1.288802	0.60785	0.577394	7.065427
sp|B5YTN8|RL2_ECO5E-DGIPAVVER	0.935981	1.251	0.69427	1.114747	3.05709	1.251	0.190119	1.114747	3.273038	1.0303	0.190119	1.114747
sp|P0ABH7|CISY_ECOLI-YSIGQPFVYPR	0.581666	0.7734	0.833904	3.115494	1.091164	0.65645	0.830457	2.334641	0.871014	0.8776	0.804277	1.243014
sp|A7ZTP0|IBPB_ECO24-QEDLEIQLEGTR	1.186993	0.57585	1.216547	1.792149	1.400854	0.7657	1.016787	2.173492	1.369716	0.57585	0.741663	2.173492
sp|P0AG32|RHO_ECO57-TNDDFFEMMK	0.703314	2.0999	0.9303	1.017284	0.997507	1.56305	0.945767	1.319155	0.680223	2.0999	1.235503	1.447045
sp|A1AIG0|RPOC_ECOK1-LGIQAFEPVLIEGK	0.766023	1.7786	0.372662	0.579342	1.051546	1.7786	1.263666	0.309454	1.155609	1.79225	1.263666	0.210286
sp|P00350|6PGD_ECOLI-EFVESLETPR	3.583513	2.474764	1.031173	0.951916	19.58235	2.38015	2.69601	0.723687	5.152296	3.71835	1.457689	0.83067
sp|B5Z0E9|EFTS_ECO5E-EHNAEVTGFIR	2.00435	2.2621	0.394912	2.133183	6.100193	2.2621	0.771257	1.478464	5.896964	1.5317	0.444558	1.478464
sp|P00509|AAT_ECOLI-TPVLTSVK	1.279138	1.5144	2.713697	1.284164	1.666299	0.9078	2.260403	0.376063	1.424195	2.31745	2.260403	1.024087
sp|Q00037|TNPA_ECOLI-LISEIR	1.172824	0.639847	0.578119	1.469111	0.127257	0.6666	0.617722	1.071289	0.127257	0.6666	0.272968	1.09123
sp|B7LF91|GCST_ECO55-EALEVQR	0.280641	0.822152	1.717141	2.079999	0.423196	0.6853	1.717141	0.963502	0.625849	1.6219	2.041229	0.259697
sp|P36683|ACNB_ECOLI-GFPLAYVGDVVGTGSSR	0.995122	1.9482	1.023468	1.082554	5.729186	2.68635	0.580947	1.170764	5.178204	1.7327	0.585067	1.155619
sp|P23869|PPIB_ECOLI-EGFYNNTIFHR	3.757964	1.963355	0.872989	3.568323	0.759728	1.289614	0.831367	3.524026	0.633871	1.090649	0.822817	1.039848
sp|P0AD50|YFIA_ECOL6-DANFVEEVEEE	0.340071	0.6396	1.00674	0.537583	0.340071	0.2975	1.462622	0.537583	0.542853	0.4116	1.013454	0.528377
sp|B7M107|RL30_ECO8A-ATLLGLGLR	0.779897	1.37	1.077366	0.443033	1.194519	1.66975	1.191056	0.827861	0.97172	1.9892	1.086248	0.538557
sp|A7ZP72|ARNC_ECO24-ADEGYDVVGTVR	0.749379	0.6643	2.914146	0.535833	1.136078	0.6643	3.985974	0.534671	1.078564	0.6643	2.779467	0.572438
sp|B7MRB2|RL7_ECO81-ALEEAGAEVEVK	1.451199	0.4523	1.884845	0.413742	1.986659	0.4849	1.380932	1.109914	1.368879	0.7424	1.795779	0.423664

sp|A7ZV12|CH60_ECO24-DTTTIIDGVGEEAAIQGR	1.022251	0.34665	0.854911	2.744798	0.847669	0.7488	1.009095	2.000814	0.988564	0.8001	0.86694	2.045681
sp|P63285|CLPB_ECO57-VLALDMGALVAGAK	0.496305	2.52925	0.863544	0.630845	0.364601	2.56725	1.525128	2.873281	0.318296	2.25145	2.118774	1.025122
sp|P0AFG7|ODO2_ECO57-QQASLEEQNNDALSPAIR	1.045592	1.5965	1.19316	3.629281	0.960713	1.39995	1.314778	2.316184	1.078258	1.39995	1.175634	2.130535
sp|P0A6G1|CH10_ECO57-SAGGIVLTGSAAAK	1.170251	0.6533	1.34588	0.951559	1.132444	0.81945	0.792206	0.7362	1.092556	0.7761	0.743156	0.775675
sp|P0A9B3|G3P_ECOL6-HITAGAK	0.53725	0.5627	2.651329	1.360641	0.463833	0.3993	1.254374	1.360641	0.294089	0.481	1.939432	1.354164
sp|A7ZTH0|TDH_ECO24-FSIDDFQK	0.667932	1.11075	1.929788	0.40233	0.719864	1.4112	1.022881	0.47705	0.361133	1.4146	1.128325	0.48161
sp|B1LNK7|GLYA_ECOSM-VGTPAITR	2.873279	1.2429	1.02776	3.074921	2.873279	1.2429	0.452368	2.707228	1.906669	1.027	0.473185	2.549717
sp|P39831|YDFG_ECOLI-AVLPGMVER	0.548112	1.018402	0.774473	1.873805	1.504309	0.810798	0.875801	1.691183	1.216332	0.42	0.781142	2.20593
sp|B7MGS0|DPS_ECO45-AVQLGGVALGTTQVINSK	0.873937	0.45765	1.656332	0.502037	0.139761	0.6574	1.687336	0.447877	0.129023	0.49985	4.44531	0.502037
sp|P0AC39|ASPA_ECOL6-AVEFQDILK	0.418832	2.5799	0.890772	0.584309	0.974208	1.4053	1.125164	1.211029	0.550849	0.6644	1.125164	1.014048
sp|A8A6H0|TNAA_ECOHS-GLTFTYEPK	1.671403	0.9674	0.847058	2.03485	1.770017	0.9674	1.160149	1.391317	1.455247	1.0955	1.046555	1.293551
sp|P0ACG0|HNS_ECO57-TPAVIK	2.82765	1.292696	6.84868	1.718653	3.124693	0.3977	4.295295	5.5397	2.691351	0.3977	3.629923	6.808072
sp|P0AC41|SDHA_ECOLI-GEGGYLLNK	0.374118	1.3059	3.50038	0.539654	1.332298	1.52195	15.85835	0.189923	1.629588	1.738	0.487681	0.189923
sp|P0AC41|SDHA_ECOLI-GLEQLK	1.09816	4.2121	1.617095	0.954415	0.383914	3.08255	1.388717	0.503951	0.267247	3.08255	1.637446	0.541597
sp|P09546|PUTA_ECOLI-LAQQEGQTGLPHPK	1.214786	1.629672	0.909356	0.7721	1.405163	1.2981	0.580687	1.266144	1.86507	1.11295	1.055506	0.733929
sp|P0A819|METK_ECO57-QSPDINQGVDR	0.929373	0.929635	0.186813	1.017278	0.644105	0.5954	0.080353	0.959887	1.908788	0.9549	0.445825	1.070761
sp|P0AFG9|ODP1_ECO57-GYGMGDAAEGK	0.644866	0.38595	0.563294	4.894535	0.938091	0.9938	0.691958	1.323951	0.88127	0.9938	0.728469	1.110152
sp|A7ZSL4|EFTU1_ECO24-STCTGVEMFR	1.704961	0.8865	1.313184	1.569661	0.949736	0.6483	1.313184	1.128075	0.915146	0.6543	1.206357	1.122301
sp|A7ZS83|RL21_ECO24-VSEGQTVR	4.997586	1.0168	0.475182	1.406264	3.036416	1.0168	0.435783	1.075585	2.89908	1.0168	0.720261	1.012596

sp|P62593|BLAT_ECOLX-IHYSQNDLVEYSPVTEK	0.50513	0.2628	0.627318	0.781067	0.643119	0.9494	1.060174	1.258731	0.657483	0.7059	0.853015	0.897722
sp|P0ACG0|HNS_ECO57-TWTGQGR	2.057499	3.6371	0.133156	1.173792	2.755826	3.6371	0.188472	1.473467	3.111626	3.6371	0.192032	1.179102
sp|P0AFG5|ODO1_ECO57-GYEVGGTVR	1.541074	1.128964	0.438976	1.767285	11.09834	1.256653	0.454481	3.011365	1.425176	1.126829	0.23016	2.304455
sp|A7ZV12|CH60_ECO24-LIAEAMDK	1.009195	0.75565	0.254413	1.1439	0.749193	0.9661	1.032688	0.704293	0.829117	0.92425	1.742115	0.749848
sp|P0A7W9|RS8_ECO57-AAVTMPSSK	0.986377	0.9262	0.621631	1.295689	0.889791	0.8526	0.942836	0.969604	0.588977	0.82875	0.927195	0.808427
sp|C4ZRQ8|DAPD_ECOBW-AEITPANADTVTR	1.041592	1.2347	1.139627	0.362849	0.967999	1.05375	1.211187	0.367117	1.178203	1.065	1.221987	0.551478
sp|B7NF50|ATPA_ECOLU-VVNTLGAPIDGK	0.867606	1.10915	1.06969	0.519162	0.867606	1.1207	1.06969	0.411923	1.055086	1.1066	0.696203	0.410489
sp|P0A6Z5|HTPG_ECO57-YSDHIALPVEIEK	0.777397	0.9291	1.291521	0.857026	0.822795	1.0253	1.106071	0.72163	0.868498	0.9023	0.92583	0.650349
sp|P0A6Y9|DNAK_ECOL6-NDPLAMQR	0.803821	1.018506	4.242221	0.336314	1.60175	0.9946	2.680972	0.336314	2.300479	1.1196	4.534304	0.247553
sp|B7MZ75|ENO_ECO81-IEEALGEK	1.94871	0.90005	1.471364	0.230399	1.32404	1.0472	1.758192	0.350094	0.755185	1.05	1.28999	0.62074
sp|P39325|YTFQ_ECOLI-AAETNVAK	0.30998	1.511633	1.420341	0.695127	0.456487	1.0212	1.210591	0.651382	0.524245	1.032	1.210591	0.703634
sp|P00582|DPO1_ECOLI-EQGYVETLDGR	0.884391	1.243673	1.275298	1.702845	1.098232	1.576008	0.67931	1.560849	1.098232	1.467316	0.67931	1.560849
sp|A7ZJ31|SYL_ECO24-VTDDIGR	1.440338	0.669131	1.635982	1.649318	0.823753	0.4501	3.051003	1.649318	0.960111	0.4895	3.077745	1.649318
sp|P0AE10|AHPC_ECO57-YAMIGDPTGALTR	1.359815	1.2612	0.460122	0.31851	0.759656	1.12655	0.640099	0.553157	0.896095	0.9919	0.721872	0.622529
sp|P0A9B3|G3P_ECOL6-VVMTGPSK	8.619207	0.6717	3.537493	0.780405	0.549911	0.6717	2.468209	0.777755	0.69986	0.58585	1.467958	0.515016
sp|P00968|CARB_ECOLI-STGEVMGVGR	2.683973	1.2008	0.774448	1.172573	6.097931	1.3751	0.10546	1.430676	5.620608	1.3751	0.097193	1.855403
sp|A7ZJA8|SUCC_ECO24-MNLHEYQAK	4.145852	0.639173	0.656317	2.653708	1.066832	0.9499	1.016734	1.228152	0.767613	0.9499	1.344064	1.318653
sp|A1A9Q9|NQOR_ECOK1-GGTPYGATTIAGGDGSR	1.285665	0.7034	0.781112	0.436912	1.407726	0.9718	1.160627	0.529237	1.314951	0.89655	1.157731	0.590924
sp|P0A910|OMPA_ECOLI-AQGVQLTAK	0.959051	2.43045	0.729956	0.832176	1.391192	1.37585	0.729956	0.660313	0.88195	1.4457	1.765893	0.529669

sp|A7ZUK1|RPOB_ECO24-VIVSQLHR	2.010348	1.464312	0.790517	0.756965	2.123258	1.38124	0.724602	0.676752	2.970465	0.9182	0.931677	1.415182
sp|A7ZJA8|SUCC_ECO24-EAEEAASK	1.88455	2.04	2.255753	2.470528	0.587597	2.7069	1.500051	1.78778	0.600035	2.7069	1.710587	2.201397
sp|A1AC27|SYD_ECOK1-NPMELTDVADLLK	4.82533	2.8435	2.35391	0.444562	2.29684	1.039	2.794839	0.500764	2.037576	1.039	2.034466	0.51233
sp|A7ZJD0|GPMA_ECO24-YGDEQVK	1.110474	1.08885	1.084565	0.6564	0.983864	1.2579	0.959284	0.600336	1.419703	1.28925	1.029073	0.348301
sp|P0A8N6|SYK2_ECO57-WDLGDIIGAR	0.649974	0.8325	0.098666	1.024054	0.305192	0.8325	0.229178	0.794606	1.679579	0.8325	0.926636	0.643973
sp|C4ZPU9|RS20_ECOBW-ANLTAQINK	1.880863	5.352	3.28508	0.079846	1.607378	3.079	2.837808	0.598459	1.287248	1.587	1.343655	1.030021
sp|P69832|PTKC_ECO57-VVLAE	2.888257	0.946603	0.671209	0.481162	1.924104	0.7186	0.213108	0.539732	0.458622	0.9659	0.596933	0.391853
sp|A7ZTP0|IBPB_ECO24-ITLALAGFR	0.947496	1.1228	0.91142	0.647451	1.022376	0.9505	0.709628	1.782905	0.947496	0.7782	0.42324	1.520035
sp|P0A6Z5|HTPG_ECO57-EGPAEDFANQEAIAK	8.985476	1.6759	1.795236	6.376264	2.322699	2.0397	0.826197	3.000577	2.097894	1.8236	0.868709	1.246529
sp|P09394|GLPQ_ECOLI-APWFHHQEGK	11.02133	0.4808	0.46982	0.927622	3.495326	0.50375	0.46982	1.334	0.747745	0.5267	0.157624	1.421203
sp|P0A9B3|G3P_ECOL6-VLDLIAHISK	0.426834	1.59415	0.092622	0.339579	0.423333	0.9667	0.182764	0.489933	0.43844	2.0997	0.910387	0.30414
sp|P0A910|OMPA_ECOLI-VEIEVK	1.143251	1.4854	2.609757	0.75247	0.938295	1.19695	2.486181	1.908687	0.82606	1.2944	2.486181	1.908687
sp|P0A7D6|PURA_ECO57-TGWLDTVAVR	0.9547	0.686845	0.642021	0.6142	1.292066	0.4284	0.831784	0.6142	1.658569	0.5854	0.791391	1.049529
sp|A8A0Q4|IHFA_ECOHS-LSGFGNFDLR	1.557616	0.4025	1.208906	0.367736	1.153351	0.71745	1.093461	0.292475	1.13357	1.0324	1.093461	0.354159
sp|P0AG68|RS1_ECOL6-ISLGLK	0.031581	0.8744	0.451874	2.358954	0.119856	0.1919	1.266239	2.109291	0.093298	0.88295	3.069751	2.038727
sp|A8A5E7|EFG_ECOHS-IATDPFVGNLTFFR	1.108974	0.9503	1.243386	0.061944	1.407947	1.0351	1.300139	0.10016	1.230461	1.00155	1.083006	0.085181
sp|P0ADZ2|RL23_ECO57-EGQNLDFVGGAE	2.053487	1.495	1.522831	0.904965	1.976376	1.47465	1.269744	1.854861	2.13698	1.47465	1.269744	1.65568
sp|P36683|ACNB_ECOLI-MLLPDTVGTGGDSHTR	1.165873	5.207428	0.57062	1.351006	1.10066	6.6493	0.884487	2.331853	1.277573	6.6493	1.083235	0.937882
sp|P0ACG0|HNS_ECO57-SLDDFLIK	0.80066	1.1233	1.970781	0.835773	0.780798	0.8982	0.862215	0.657299	0.851774	1.1233	0.862215	0.604914

sp|B7M1N3|RL4_ECO8A-DAQSALTVSETTFGR	2.225894	0.279	1.722989	0.397348	2.232502	0.43805	0.513604	0.424499	2.297116	0.5971	0.816071	0.458198
sp|P0AC41|SDHA_ECOLI-NFGGEQAAR	3.227202	3.3145	0.439241	1.779261	3.578458	2.2509	0.475159	1.569055	3.896956	2.2509	0.777167	1.253241
sp|P0AG32|RHO_ECO57-KEELLTTQEELQK	0.414745	0.5024	0.4429	2.227238	0.705016	0.74605	0.657672	1.096753	0.881348	0.84855	1.217897	0.748629
sp|P0A9L3|FKBB_ECOLI-LIDGTVFDSSVAR	1.754828	0.8421	6.291335	0.081841	1.071581	1.24755	1.14186	0.116947	1.317011	1.2801	1.253324	0.166142
sp|P0A7W3|RS5_ECO57-AVLEVAGVHNVLAK	0.894346	0.5793	3.106592	0.142741	0.69583	0.5793	2.945277	0.204486	0.574921	0.404	2.548451	0.272813
sp|P06959|ODP2_ECOLI-AEAAPAATGGGIPGMLPWPK	0.945733	2.6085	1.139852	0.235	0.906701	1.132	1.22235	0.220383	0.82523	1.132	1.140631	0.406134
sp|P0ACA3|SSPA_ECOLI-LYMHR	0.344583	1.604737	0.478006	0.633464	0.387108	1.521104	0.137278	0.552515	4.445915	2.22245	0.573742	0.946461
sp|B7L4J7|RL5_ECO55-LHDYYK	0.554686	1.264214	3.893516	1.214145	0.708439	0.8195	5.996328	1.214145	1.086451	0.6177	1.123013	0.887421
sp|P00509|AAT_ECOLI-VGACTLVAADSETVDR	0.29869	0.6734	0.792845	0.614265	0.260003	0.6734	0.887147	0.750927	0.305124	0.42175	0.887147	0.861806
sp|P0AGF0|SUCD_ECOL6-MGHAGAIIAGGK	0.65893	0.7205	1.02538	0.652339	0.196646	0.5016	1.302797	2.732427	0.632681	0.7601	1.117381	1.442443
sp|B1IPL0|IF3_ECOLC-LTGLEGEQLGIVSLR	0.983892	0.63905	1.418698	0.547036	0.796371	0.63905	1.27734	3.55719	0.663762	0.9584	2.079579	1.027451
sp|P0AC41|SDHA_ECOLI-DASESDVEASLDR	0.97583	0.9368	1.293451	0.854073	0.900729	0.9584	1.389987	0.949482	0.900729	0.9584	1.389987	0.949482
sp|B1XB97|HSLU_ECODH-NILMIGPTGVGK	1.171214	0.98615	0.301173	3.49048	1.304093	1.2679	0.301173	3.49048	1.221311	1.30005	0.157844	3.65597
sp|P0AEQ3|GLNH_ECOLI-ADAVLHDTPNILYFIK	0.922465	7.0443	0.495745	1.401814	5.518439	7.0443	0.123811	3.695392	2.732099	6.26305	0.123811	3.334193
sp|P0ACG0|HNS_ECO57-AMDEQGK	0.277667	1.2422	0.605146	0.816622	0.68211	0.7259	1.055695	0.652869	0.759475	1.3656	1.080654	0.772901
sp|P33602|NUOG_ECOLI-DAAPDATFR	0.543038	0.7986	1.08056	1.60595	0.952418	0.7986	0.857423	1.336795	0.952418	1.00205	0.97368	1.336795
sp|P0A6Y9|DNAK_ECOL6-DAEANAEADR	3.379462	0.6692	0.461325	6.513747	3.813074	0.78535	0.548668	5.962226	6.38797	0.6954	0.534604	6.513747
sp|P19926|AGP_ECOLI-FDSVLNEAVK	1.47	0.8448	1.582332	1.027789	1.052466	0.8448	0.834412	1.027789	1.164927	0.87455	1.217753	0.56411
sp|A7ZTU4|ATPB_ECO24-GLDVK	0.318956	0.68755	3.040157	0.303089	3.223094	0.82485	5.448477	1.068302	1.846666	0.8234	1.63403	1.070464

sp|B7L4J7|RL5_ECO55-EQIIFPEIDYDK	2.141313	1.42725	0.744558	0.414647	1.539642	1.4152	0.954234	0.768423	1.570861	1.4184	0.912474	0.572232
sp|P15254|PUR4_ECOLI-DNAAVMEGSEVGR	4.561462	1.1716	0.644605	3.875935	4.845311	0.722	0.581164	0.449492	6.120219	0.722	1.004283	6.875225
sp|P0A9G6|ACEA_ECOLI-VQQPEFAAAK	0.509173	0.55715	5.554111	0.488408	1.053478	0.6027	1.50144	0.464753	1.053478	0.574	1.02477	0.450285
sp|A8A466|PGK_ECOHS-MTDLDLAGK	1.231847	0.5021	0.736901	1.764525	1.48168	0.9268	0.653085	0.935697	1.234259	0.7621	0.628044	1.075482
sp|P0A910|OMPA_ECOLI-DGSVVVLGYTDR	1.133637	0.7447	1.032544	1.285779	1.155994	0.99435	0.727388	1.344975	1.058907	0.9761	0.732883	1.383802
sp|B7NMH9|NFUA_ECO7I-VEYMLQSQINPQLAGHGGR	1.288406	1.276501	0.98091	1.651687	1.288406	1.046556	0.711589	1.39206	1.288406	1.077603	0.711589	1.39206
sp|P00968|CARB_ECOLI-NNEVYLIEVNPR	0.755073	1.0142	0.765794	0.255011	2.017588	0.9916	0.255207	0.729298	0.960311	0.70635	0.661603	0.815643
sp|P37902|GLTI_ECOLI-LMDDTIAQVQTSGEAEK	0.335516	1.0734	0.78038	0.085856	0.183259	0.90835	0.864133	0.094291	0.447787	0.90835	0.741835	0.096692
sp|P0A9P2|DLDH_ECO57-ALAEHGIVFGEPK	0.852178	0.64035	8.150321	3.236681	0.426436	0.57815	2.985617	3.231319	0.615975	0.7934	2.09502	3.155088
sp|Q47452|PCOA_ECOLX-VTADALGR	3.593818	2.968503	0.086807	1.283924	3.608358	2.876952	0.193777	1.174796	3.593818	3.6407	0.160021	0.97898
sp|A7ZSL4|EFTU1_ECO24-TTLTAAITTVLAK	2.473814	1.265713	2.321022	0.125116	2.912616	1.249395	1.862734	0.218814	3.243487	1.7737	1.198918	0.052874
sp|P0ABC8|HFLK_ECO57-GGNLMVLPLDQMLK	4.061917	0.734	0.152971	0.508109	4.086173	0.734	0.168955	0.306589	3.831815	1.626	0.74084	0.941754
sp|P0A9S3|GATD_ECOLI-HQDEVR	1.859608	1.4719	0.928545	0.445085	1.859608	1.4719	0.928545	0.374547	2.119059	1.4719	0.988914	0.30372
sp|P0AG68|RS1_ECOL6-HEAWITLEK	0.894324	0.6791	2.131046	2.772878	1.185948	0.6791	5.400476	2.09343	1.309472	0.6791	5.400476	2.09343
sp|A7ZPU1|UPP_ECO24-LVSNIDER	0.674907	0.746	1.615262	1.154574	1.856194	0.9254	1.870977	1.398631	1.68255	0.9254	1.870977	1.398631
sp|P00579|RPOD_ECOLI-AATHDVLAGLTAR	0.701714	0.491123	0.90128	4.408731	0.607667	0.2046	0.53063	6.1764	0.486004	0.16095	0.567219	5.377279
sp|B1IQV7|PNP_ECOLC-AAVAGIAMGLVK	0.987458	0.2083	0.270139	3.028033	1.260559	0.2083	0.334669	2.099206	0.958155	1.4959	0.397415	0.897672
sp|P0AFG5|ODO1_ECO57-LALDFR	2.8081	0.2734	1.380849	44.53903	4.349515	2.3194	1.496126	2.443034	0.411631	2.3194	0.507121	6.629154
sp|B7M6B0|TOLB_ECO8A-FPAWSPYL	1.497782	0.931969	0.215851	0.844693	1.106276	1.317807	0.223434	1.183719	1.158138	1.461685	0.286377	0.864326

sp|B7M1N4|RL3_ECO8A-MAGQMGNER	0.414946	1.8488	1.666791	0.362782	0.719208	1.43915	4.72685	0.279498	0.658498	0.8122	8.393455	1.033731
sp|K0BE10|TAL_ECO1E-AQQIVDATDK	0.736945	1.1389	0.684553	0.753695	0.505739	1.25165	0.861534	0.9222	0.703172	1.3299	0.861534	1.074227
sp|B5Z3U4|TIG_ECO5E-SELVNVAK	2.622613	0.99095	0.28858	0.867994	1.134845	0.99095	0.284715	0.71856	0.643926	0.8674	0.513982	0.910117
sp|B7MZ75|ENO_ECO81-SGETEDATIADLAVGTAAGQIK	0.798024	0.4738	1.81685	2.391785	0.661023	0.4738	1.704372	1.402242	1.197335	0.6477	1.350935	1.382583
sp|P0A9B3|G3P_ECOL6-AAAEGEMK	1.245317	0.8499	0.873131	0.937372	1.229269	0.9149	0.932808	0.971022	1.178794	0.9344	1.072977	0.899202
sp|A8A5E7|EFG_ECOHS-MGLALGR	2.503912	0.926812	1.334316	2.311564	4.378745	1.0897	1.071286	2.842396	2.082243	0.8711	2.000256	1.430093
sp|P0AE10|AHPC_ECO57-AAQYVASHPGEVCPAK	0.652878	0.5539	0.719638	0.746626	1.809534	1.18865	0.827604	0.483775	1.17047	1.4729	0.881909	0.784487
sp|P0A7B0|IPYR_ECO57-DVNDLPELLK	1.827514	0.98255	0.784784	0.960253	1.869655	1.1423	1.014297	0.566941	1.262599	1.1423	0.998002	0.568966
sp|P63285|CLPB_ECO57-QLEAATQLEGK	0.690607	1.1107	1.29306	0.468612	0.677012	0.949	2.734439	0.393796	0.923332	0.9458	1.837835	0.330974
sp|A8A750|KATG_ECOHS-VDLLNQHSNR	1.616792	0.571354	1.021287	1.460195	0.873655	0.7342	0.573128	2.794277	0.660545	0.7342	0.573128	2.794277
sp|A7ZMI4|RL20_ECO24-ASVEIDR	1.443073	1.321736	3.224097	8.159213	0.284532	0.91455	2.501171	5.345199	0.284532	1.4407	6.08532	6.66661
sp|B1XB97|HSLU_ECODH-LVNPEELK	0.547595	0.4308	1.091621	0.902045	0.547595	0.41945	0.737007	0.881533	1.362188	0.41945	2.104274	1.033109
sp|P69784|PTGA_ECOL6-STLTPVVISNMDEIK	0.479178	0.951	1.044031	0.24094	0.584421	1.0027	0.752667	0.446913	0.718822	0.792	0.659671	0.458984
sp|P0ACF1|DBHA_ECOL6-EGDAVQLVGFGTFK	0.827537	2.8582	1.017754	0.458631	0.97382	1.27325	1.14585	0.549231	0.979781	1.19005	0.624238	0.561724
sp|C4ZRQ8|DAPD_ECOBW-FADYDEAR	4.106672	0.2347	0.106106	0.530202	17.8008	0.43535	0.12294	1.128703	3.721367	0.636	0.095216	0.568538
sp|P31979|NUOF_ECOLI-AIAEATEAGLLGK	2.395658	1.075012	0.364897	0.949535	5.911846	0.4081	0.527289	0.64962	3.285601	0.39585	0.435052	0.64962
sp|P36683|ACNB_ECOLI-VEQAFELTDASAER	0.537323	2.1063	2.798001	1.343516	0.732947	2.1063	1.463358	0.372327	0.76296	1.4905	1.425289	0.398927
sp|P0A6Y9|DNAK_ECOL6-KQVEEAGDK	3.233962	0.6405	0.067557	0.777959	4.344317	0.6407	0.065124	0.693779	3.233962	0.6407	0.367616	0.707091
sp|Q1R6A9|RL13_ECOUT-VIEIAVK	2.946667	0.36	1.213182	0.850488	2.378171	1.0302	1.878543	1.503222	2.378171	0.4367	1.765637	1.503222

sp|P25553|ALDA_ECOLI-VCLELGGK	0.446721	0.572738	0.561732	9.224406	0.478988	0.790425	1.120714	9.165412	0.470189	0.873975	0.75334	1.554147
sp|P0AEB2|DACA_ECOLI-EFASEPVWFGDSDR	1.691713	0.925667	0.387466	0.685873	1.132761	1.1306	0.441473	0.423684	1.435223	1.3613	0.602219	0.64707
sp|A7ZPS1|PUR7_ECO24-AAGSLVK	2.313526	1.3046	1.934662	5.631949	2.83098	1.12255	0.256046	4.544713	3.687231	1.1083	0.594427	5.521393
sp|P00968|CARB_ECOLI-EVIPPYYSVK	1.343178	0.8567	0.196198	0.329313	0.776367	0.8919	0.609988	0.600154	1.049145	1.2502	0.741118	0.64263
sp|P0A807|RRF_ECO57-MISDIR	0.401744	0.3746	0.075393	3.187454	1.15425	1.4567	0.181329	2.860459	1.15425	1.4567	0.116629	2.860459
sp|A1AF92|GCSP_ECOK1-DDEILTHPVFNR	0.73483	0.68165	0.655882	1.451346	0.73483	0.899	0.683022	1.181062	0.739164	0.9752	0.832966	1.474251
sp|A7ZUK1|RPOB_ECO24-GEVDDIDHLGNR	1.746534	0.8284	0.970532	2.371624	1.746534	2.2447	1.917047	0.751511	1.746534	0.8279	1.988956	0.650291
sp|A7ZQ54|GRPE_ECO24-IANLEAQLAEAQTR	0.779807	1.2598	1.779831	1.512861	0.677686	0.9892	1.602544	1.165081	0.127563	0.9892	1.617624	1.512861
sp|A8A750|KATG_ECOHS-VLGANFDGSK	1.666751	0.8248	1.754499	0.999058	0.866314	1.3198	0.939289	0.969665	1.020217	1.3198	0.895778	1.402695
sp|B1LNK7|GLYA_ECOSM-GGSEELYK	3.857723	4.57615	2.100472	0.863996	4.299947	1.2086	2.100472	2.591077	6.642555	1.8727	2.100472	0.650013
sp|B1X8H5|SYGB_ECODH-VADISLLQ	0.1107	1.2317	0.603589	0.394519	0.1107	1.2317	0.603589	0.394519	0.478545	4.63875	0.603589	0.35882
sp|B7UIL4|RS2_ECO27-LKDLETQSQDGTFDK	1.591009	0.4314	0.091236	0.294966	1.42519	0.7505	1.140269	0.584682	1.801876	0.7505	1.178691	0.990622
sp|B7LD85|SYS_ECO55-AELDALQAEIR	0.488541	2.92715	1.226693	1.435584	0.770193	2.92715	1.670365	1.132106	1.074922	2.2683	1.226693	0.523946
sp|P0ADG8|IMDH_ECO57-VGAAVGAGAGNEER	1.656764	3.4125	0.959535	0.067042	1.656764	3.4125	1.387961	0.053247	1.752873	3.4125	2.012341	0.168619
sp|P00579|RPOD_ECOLI-SHATAQEEILK	1.450944	1.396937	1.76416	2.474217	0.457387	1.462099	0.949174	1.275786	0.981874	1.7138	0.949174	0.617018
sp|A7ZP90|NUON_ECO24-GPDADSLFSYR	2.896461	0.739	1.055091	0.749009	2.600801	0.85755	1.749393	0.655495	3.788815	0.9761	1.183602	0.841307
sp|B7MIU7|RS16_ECO45-VGFFNPIASEK	0.527736	0.7148	1.648576	0.300424	0.688695	1.01185	1.075837	0.239912	0.67272	0.8764	1.131619	0.234269
sp|B7UJP9|YAJQ_ECO27-GIEGSSLDVPENIVHSGK	0.903997	2.1095	1.858674	1.318468	1.35881	0.3579	0.540304	0.43217	1.4375	0.3579	0.575896	0.43217
sp|P77774|BAMB_ECOLI-ALNADDGK	0.99218	1.5005	1.248531	0.761206	1.801606	0.9095	0.534017	0.785992	3.297724	0.9095	1.095427	0.855341

sp|A1A7M1|BAMA_ECOK1-DEVPWWNVVGDR	2.657684	2.20855	1.945672	0.571084	1.956044	2.1379	1.505471	0.752566	4.782302	2.12685	1.291835	0.554204
sp|A8A750|KATG_ECOHS-FLNDPQAFNEAFAR	2.016575	0.7398	0.535535	2.006537	2.998085	0.916	0.535853	1.247963	2.016575	0.916	0.494874	0.503487
sp|B5YTN8|RL2_ECO5E-LEYDPNR	1.13937	0.9865	1.289804	1.824226	1.079293	1.6852	1.114269	1.824226	1.104644	1.3289	1.435437	2.586859
sp|Q19NJ4|CH602_ECOK1-LAGGVAVIK	0.260759	0.6154	1.837737	0.823462	0.38553	0.9401	2.180007	0.977911	0.44538	0.9401	1.984245	0.708145
sp|Q1R626|RL18_ECOUT-AIAEQLK	0.376391	0.1854	0.11477	0.268876	0.400799	1.1038	0.157436	0.676625	0.425185	1.1038	0.157436	0.803338
sp|P00968|CARB_ECOLI-IMVLGGGPNR	0.678706	1.181589	3.787778	1.019909	0.753172	1.194959	3.365701	1.109413	3.760501	1.235132	0.786071	0.718761
sp|A7ZUD3|TPIS_ECO24-ESDELIAK	1.817826	1.080334	0.602177	1.639911	2.483865	1.040062	1.877049	1.738735	2.735407	1.1515	1.131793	1.521657
sp|P33602|NUOG_ECOLI-ADAVVVLENDLHR	1.267578	0.859	1.28241	0.803348	1.046131	0.8159	0.987101	0.910985	1.216367	0.74905	1.414002	0.690821
sp|P63285|CLPB_ECO57-IDMSEFMEK	0.786408	1.376	0.466372	2.13314	1.438002	1.46455	0.351072	2.499469	1.476201	1.32	0.377556	1.477853
sp|B1IUY2|SYA_ECOLC-AVEDLVNTQIR	1.998769	1.553	0.851852	1.150845	2.032328	0.9842	0.719214	1.102109	2.032328	0.9842	0.611101	1.021537
sp|A7ZST1|PCKA_ECO24-AETLAK	1.398184	1.58515	1.11425	4.242034	1.037215	1.0791	1.68045	4.696029	1.639037	1.0791	1.159081	3.82002
sp|P0A910|OMPA_ECOLI-DNTWYTGAK	0.60886	1.09625	0.363054	0.548557	0.712785	1.1805	0.513243	0.701699	1.359713	1.09625	0.444898	0.831837
sp|B7LE54|FABA_ECO55-ALGVGEVK	1.038578	0.4167	0.558813	0.810061	1.073944	0.5549	0.613671	0.781256	1.021701	0.6427	0.654115	0.623385
sp|B1IQV7|PNP_ECOLC-EIMQVALNQAK	4.07602	1.38275	1.001499	0.306849	4.07602	1.45385	0.797226	2.775724	3.813093	0.5456	0.778556	1.746397
sp|A8A6H0|TNAA_ECOHS-GDEAYSGSR	4.317822	2.0847	1.202843	1.205396	3.018868	1.8125	0.742453	1.45961	3.018868	1.7195	0.911848	1.727101
sp|P0A9B3|G3P_ECOL6-KHITAGAK	1.080442	0.6926	1.056691	0.280364	0.846033	1.1308	1.964091	0.346066	0.846033	0.6926	1.434066	0.262818
sp|A7ZSL4|EFTU1_ECO24-EHILLGR	0.432057	0.4311	2.550632	7.85983	1.581367	0.70035	1.783156	1.02607	1.581367	0.70035	0.756953	0.899744
sp|B1LNK7|GLYA_ECOSM-EADAALGR	0.386315	0.59635	1.169903	2.289534	0.492266	0.8877	0.833907	2.68393	0.492266	1.3577	0.979817	1.663214
sp|P00509|AAT_ECOLI-AIWEQELTDMR	0.988175	0.5932	0.691859	1.198873	0.809983	0.56695	1.685144	0.897102	0.923514	0.5932	1.604966	0.889275

sp|A8A466|PGK_ECOHS-LTVLDSLSK	0.403834	3.71045	0.296695	1.890864	0.628018	2.60525	0.569844	1.630095	1.698886	2.5902	0.90541	1.361209
sp|A7ZPS1|PUR7_ECO24-LGVQLD	0.73059	0.4614	0.179123	2.794118	0.73059	0.4614	0.179123	3.433092	0.73059	0.4614	0.179123	2.904725
sp|P0AC41|SDHA_ECOLI-EFDAVVIGAGGAGMR	1.670993	1.5423	0.666704	0.571981	0.847497	1.14315	0.58665	2.489993	1.494528	1.1084	0.393683	2.333875
sp|P0AD62|KPYK1_ECO57-LDAPLIVVATQGGK	0.647192	0.6117	0.456622	1.006946	0.5797	0.5453	0.427374	1.20899	0.685751	0.6117	0.520776	1.133012
sp|A7ZSD0|MDH_ECO24-FFSQPLLLGK	1.137911	1.3541	1.25889	2.130029	0.503816	0.8793	1.511979	0.545288	0.590123	0.91795	1.339691	0.298032
sp|P63285|CLPB_ECO57-IINGEVPEGLK	1.790528	0.7314	0.335941	0.588489	1.978028	0.66295	0.575206	0.563597	1.978028	0.66295	0.629481	0.669885
sp|P00968|CARB_ECOLI-FQHAVER	0.236526	0.9146	0.651924	0.365296	0.241455	0.9146	0.516796	0.365296	0.403286	0.9146	0.553452	0.264357
sp|P0AB78|KBL_ECO57-YANNDMQELEAR	1.10758	1.439735	0.763931	0.863941	0.666669	1.6338	0.689815	0.815976	0.618262	2.3955	1.061839	0.730415
sp|P0A9A7|FTSZ_ECOL6-QVQQPVMDR	0.498492	1.7791	0.695819	1.671916	0.498492	1.0957	0.695819	7.873579	0.498492	1.0957	0.771789	1.743082
sp|A7ZNH9|YEEX_ECO24-VDDYIIK	1.810871	1.06075	0.071988	0.343377	3.664116	0.7673	0.071988	1.116205	2.505828	0.8874	0.179216	1.089397
sp|A8A750|KATG_ECOHS-SNPLGEDFDYR	0.746234	0.90305	0.767458	2.342285	0.602592	1.008403	0.767458	2.013914	0.657004	1.4731	1.922202	0.972623
sp|A7ZMI4|RL20_ECO24-ILADIAVFDK	0.929171	0.6434	0.693333	0.06865	0.957388	0.5917	0.713178	0.07331	0.874805	0.3991	0.683164	0.286972
sp|P27302|TKT1_ECOLI-TIIGFGSPNK	4.564199	1.266107	1.306295	0.823403	2.475264	0.9742	4.713556	1.526202	2.795808	1.1785	5.500567	0.096534
sp|P0A910|OMPA_ECOLI-AQSVVDYLISK	1.741559	1.0536	2.407871	0.724191	1.182709	0.9936	0.806513	0.992606	1.365666	0.86875	0.779528	0.992995
sp|P60624|RL24_ECOLI-DDEVIVLTGK	0.402648	7.2471	0.151709	0.912293	0.519742	7.2471	0.064168	1.556537	0.443134	7.2471	0.171049	1.556537
sp|A7ZPA8|YFBU_ECO24-VTFLGFDAATEAR	0.212391	1.2289	0.595632	0.810506	0.384256	1.2289	0.537703	0.90988	0.729392	1.08385	0.537703	0.686476
sp|P23869|PPIB_ECOLI-NFLDYCR	1.433482	1.710275	1.051077	0.950051	1.826686	1.6134	1.123802	1.668485	1.826686	1.6134	5.311573	1.668485
sp|B7NF50|ATPA_ECOLU-DHAPLMQEINQTGGYNDEIEGK	1.005554	2.4579	0.745163	2.82741	0.796593	2.4579	0.352703	1.307212	0.572992	0.7572	0.202919	1.307212

sp|A7ZTU4|ATPB_ECO24-AAPSYEELSNSQELLETGIK	0.380161	0.2228	0.595344	0.676727	0.536108	1.1106	0.297773	1.881392	0.536108	1.305	0.922294	1.953217
sp|A7ZTU4|ATPB_ECO24-WAIHR	0.999267	0.9655	1.882677	2.79499	1.316393	0.9655	2.765288	2.79499	3.178358	0.9655	3.136656	1.796436
sp|B1IT06|RS6_ECOLC-FNDAVIR	1.456601	0.185	11.63959	8.468154	0.748199	0.6749	2.894356	4.780624	1.209889	0.6749	2.045801	0.894816
sp|A1AIG0|RPOC_ECOK1-IPQESGGTK	1.36312	1.16145	2.216771	0.240231	1.119833	0.8565	1.634199	0.317321	1.135598	1.28015	1.733577	0.32358
sp|P0A910|OMPA_ECOLI-HFTLK	2.022956	5.1719	1.068978	1.1949	1.339014	5.1621	1.068978	0.688024	2.061644	5.1621	1.697079	1.950097
sp|P08200|IDH_ECOLI-TVTYDFER	0.591759	1.060747	3.021595	1.538732	0.551282	1.021856	2.669734	1.059657	0.573238	0.5443	1.450832	2.17923
sp|P0A7B0|IPYR_ECO57-ESGALFVDR	7.524718	0.778443	0.536034	0.84525	5.76301	0.773887	0.407767	0.84525	1.860845	0.7771	0.418439	1.979593
sp|P0A6Y9|DNAK_ECOL6-HMNIK	5.259117	0.1961	1.564174	0.350757	0.842138	1.3294	7.53511	0.641665	0.652537	0.2612	1.438098	0.341235
sp|B7L4J7|RL5_ECO55-ALLAAFDFPFR	1.885785	0.924699	0.601369	0.595994	1.775783	0.832513	0.627046	0.854987	1.729649	0.3864	0.822786	0.226586
sp|P63285|CLPB_ECO57-RLDMLNEELSDK	1.198749	0.997645	0.173537	1.529355	0.584579	0.585168	0.579032	0.47151	1.233187	0.24445	0.579032	0.920217
sp|P06959|ODP2_ECOLI-FGEIEEVELGR	17.13912	1.712908	0.553083	7.827221	2.855578	1.60282	0.802457	5.60573	2.683788	1.5498	1.061408	3.678303
sp|A1AHU3|ILVD_ECOK1-VSDSQSDQVER	1.449931	1.1325	1.588766	0.803659	1.456333	1.04515	1.161944	0.560544	1.631459	1.04515	1.221989	0.794996
sp|P0A9S3|GATD_ECOLI-SVTAIDISSEK	0.296163	1.8789	0.258846	0.67301	0.2927	1.16765	0.427868	0.875728	0.260827	1.16765	1.056998	0.831413
sp|A7ZNT3|SYM_ECO24-DAPYFGFEIPNAPGK	3.275137	0.8283	1.205421	0.140555	2.494178	0.80445	0.88891	0.202151	1.709749	0.7806	1.728038	0.359853
sp|P00954|SYW_ECOLI-NNVIGLLEDPK	0.709752	2.2163	0.591067	0.10355	0.796584	2.2163	0.522909	0.10355	3.187444	1.8404	0.856423	0.480025
sp|A7ZUK1|RPOB_ECO24-GETQLTPEEK	1.523482	1.7861	0.833062	0.342706	1.120775	1.0916	0.867266	0.880091	1.154278	1.0916	0.857886	0.710168
sp|C4ZRQ8|DAPD_ECOBW-INDNQVIEGAESR	1.336259	0.4783	0.776812	1.380803	0.840939	0.4783	0.554853	1.557266	1.679706	0.4783	0.797845	0.927181
sp|P0AC39|ASPA_ECOL6-GEYQYLNPNDHVNK	1.029638	1.561	0.969168	0.356553	1.055629	1.5724	0.961899	0.379467	1.043093	1.561	0.896151	0.370221
sp|B6HYN0|MIAB_ECOSE-GENYDGTTGSFADLLR	2.803222	0.622082	0.888792	1.218757	1.70915	0.8179	0.703157	2.281765	1.628147	0.8179	0.693779	2.239201

sp|P45523|FKBA_ECOLI-TSSTGLVYQVVEAGK	1.301955	1.9674	0.568074	0.707811	0.515525	2.0208	1.193929	0.77653	0.452314	2.0742	1.380776	0.899283
sp|P0A7W0|RS4_ECO57-LSDYGVQLR	0.263863	1.400422	0.226277	1.097382	0.424034	1.223107	0.435305	0.816864	0.585288	1.307831	0.406739	0.872418
sp|A7ZTU4|ATPB_ECO24-QLDPLVVGQEHYDTAR	0.923311	0.7232	0.832661	2.831945	1.54338	0.7754	0.732079	1.186984	1.761093	0.8438	0.763618	1.183956
sp|P0A6Y9|DNAK_ECOL6-TFEVLATNGDTHLGGEDFDSR	1.227119	0.9809	0.603203	0.822615	1.058217	0.9809	0.610809	0.822615	1.001463	0.60495	1.07563	0.569884
sp|B7MRB2|RL7_ECO81-DLVESAPAALK	1.584992	1.1993	1.613877	0.827251	1.957363	1.1993	1.026142	1.386314	1.198174	1.29225	1.053391	1.555876
sp|P0AFD2|NUOE_ECOL6-MHENQQPQTEAFELSAAER	0.245205	1.2915	0.88081	4.965613	0.418792	1.18785	0.937336	1.383161	0.288238	1.2915	1.146862	1.113699
sp|B7M1N3|RL4_ECO8A-DATGIDPVSLIAFDK	1.429418	1.17985	1.112731	0.125821	1.486431	0.94365	1.54077	0.121081	1.533751	0.9066	1.54077	0.10371
sp|A7ZSJ4|RL6_ECO24-HADNTLTFGPR	0.459536	0.646175	1.938891	0.525913	0.62457	0.569307	1.609826	0.473442	0.62457	0.54205	1.597552	0.474084
sp|P33599|NUOCD_ECOLI-ATGIDFDVR	2.822516	1.341641	0.911966	0.96524	1.245749	0.9115	0.841648	0.858548	0.529573	1.34425	0.994126	0.923958
sp|P21513|RNE_ECOLI-MLINATQQEELR	1.659695	1.8187	0.418962	0.746949	1.327818	1.4579	0.476917	0.628947	3.084859	1.0971	0.390298	0.628947
sp|A7ZV12|CH60_ECO24-SFGAPTITK	0.983588	0.94875	0.667319	0.724552	0.942353	0.9286	1.182062	0.647997	0.908812	1.1508	0.843467	0.635471
sp|B1XB97|HSLU_ECODH-ILDVLIPPAK	0.794403	0.78945	0.977173	0.174802	0.743139	0.8348	0.910021	0.18813	0.834585	0.8333	1.070817	0.17284
sp|B7MYP6|RL19_ECO81-VFQTHSPVVDSISVK	0.823753	1.7931	1.41718	1.261865	0.830077	1.37435	1.371539	0.672844	0.913327	1.97855	1.435574	0.892303
sp|A7ZV12|CH60_ECO24-GVNVLADAVK	1.043178	0.75725	1.922536	1.296939	1.107424	0.654	1.049496	1.408043	1.40065	0.63955	0.860292	1.142774
sp|P0A910|OMPA_ECOLI-FGQGEAAPVVAPAPAPAPEVQTK	0.509197	0.7355	1.229337	1.229135	0.731638	0.8412	1.008556	0.869026	0.693428	0.8098	1.173852	0.734728
sp|B7UPE0|RL10_ECO27-LATLPTYEEAIAR	4.23341	0.1321	0.131196	2.457798	4.23341	0.1321	0.131196	2.457798	1.161615	1.00845	0.56703	1.349576
sp|P0AFG5|ODO1_ECO57-ATFNSEEK	1.086569	0.3738	0.896367	1.064294	1.27045	0.7221	1.346033	1.076342	1.270368	0.7221	1.057012	1.113301
sp|P62593|BLAT_ECOLX-LLTGELLTLASR	0.610759	0.1537	0.42099	0.501415	0.610759	0.2138	0.421073	0.554432	1.140371	0.2739	0.730495	0.317607

sp|P0A807|RRF_ECO57-SQDDVQK	3.227046	1.099785	2.280428	0.115117	3.851843	1.2991	1.373488	0.312468	3.740292	1.2991	1.439777	1.106834
sp|P08200|IDH_ECOLI-FTEGAFK	1.567329	4.1844	2.42999	0.239804	1.567329	1.8386	0.367107	0.729086	1.340573	0.9714	0.633993	0.239804
sp|P0A9P2|DLDH_ECO57-FNLMLETK	1.503441	1.84695	1.373441	0.402152	0.7951	0.71255	2.025544	0.307634	0.782717	0.76225	1.735068	0.275305
sp|P0ABK0|CYDA_ECOL6-SGSTDQAVR	2.120734	1.0725	0.979915	1.001967	0.63194	1.0725	2.344711	1.304909	0.608263	0.9121	2.165118	0.685242
sp|P0A9P2|DLDH_ECO57-VINQLTGGLAGMAK	2.770363	1.502369	0.837761	1.178511	3.798086	1.290867	0.166144	0.820254	0.321743	1.094798	1.656989	0.748264
sp|A8A4Y7|ASSY_ECOHS-AYSTDSNMLGATHEAK	1.044828	1.50895	1.610236	0.903933	0.770918	1.0786	1.414081	0.964759	0.751638	1.45285	1.534766	0.810551
sp|A8A4Y4|IF2_ECOHS-GMASGAVIESFLDK	0.137359	0.6233	3.273743	0.037103	0.539354	0.9316	1.222626	0.769821	0.560941	0.6667	0.569056	0.254181
sp|P0A807|RRF_ECO57-VPLPPLTEER	1.778358	1.63735	1.079785	1.372707	1.209981	1.3211	0.711739	0.833333	1.846272	1.1593	0.733628	0.653896
sp|B1LNK7|GLYA_ECOSM-ANITVNK	1.566183	0.6532	0.526702	0.77368	0.813181	0.856	0.964194	0.827874	0.827686	0.8217	1.32032	0.800239
sp|P08200|IDH_ECOLI-DWGYQLAR	1.446081	1.036324	0.157348	1.222336	3.314534	1.51925	0.385422	1.432682	3.10409	1.207	0.493081	2.238511
sp|P0A9A7|FTSZ_ECOL6-MFEPMELTNDAVIK	1.447412	3.87995	2.251777	0.880553	1.350285	4.6766	1.390004	1.2184	2.022186	4.5096	1.780117	0.817489
sp|A1AF92|GCSP_ECOK1-LQDAFPVLYTGR	0.743263	0.5415	1.176076	0.428046	0.795785	0.7652	1.174866	0.583382	0.899923	0.95035	1.057478	0.466709
sp|B7LA23|GLPK_ECO55-SSEVYGQTNIGGK	0.842354	0.47365	1.02632	0.726899	0.816469	0.6022	1.036033	0.493258	0.913406	0.8297	1.251371	0.493258
sp|P0AB72|ALF_ECO57-ANEAYLQGQLGNPK	1.147773	0.7882	0.649816	0.402603	1.192743	0.8787	0.962678	0.473202	1.053379	0.9547	1.278158	0.337412
sp|P0AD50|YFIA_ECOL6-QMEITPAIR	0.246403	0.3084	1.536113	0.711767	0.27349	3.575	1.612188	0.57917	1.705934	0.3084	1.612188	1.781983
sp|P0AG68|RS1_ECOL6-AISLSVR	1.81479	0.800901	1.082343	0.123678	2.48081	0.3283	1.533649	0.1069	1.967525	0.3957	2.735273	0.090991
sp|A1AIG0|RPOC_ECOK1-YIVNEVQDVYR	3.235499	0.2887	0.297773	1.481821	3.931423	1.4849	0.201451	1.765817	3.610324	1.4849	0.175919	1.765817
sp|P33602|NUOG_ECOLI-IPELAGIK	1.584982	0.1564	1.001042	2.363549	0.942047	0.5426	0.589574	2.755284	0.394298	0.4375	0.420817	3.627744
sp|P0AG68|RS1_ECOL6-VSLGLK	0.550166	0.605915	0.227801	1.303925	0.533117	0.705922	0.61985	2.663993	0.906681	0.9456	0.644543	2.376873

sp|A7ZJA8|SUCC_ECO24-VAEETPHLIHK	0.469484	0.998169	0.494108	2.033565	1.085132	1.2996	0.304146	2.814726	0.416159	0.70225	0.299361	3.052951
sp|A7ZJ31|SYL_ECO24-APTDGEQDR	0.95581	0.59438	1.101473	6.460896	4.653426	0.852789	1.101473	4.150004	5.356831	1.5956	0.734958	6.587691
sp|A7ZSJ4|RL6_ECO24-DGYADGWAQAGTAR	0.904575	1.2821	0.884484	0.747723	1.171163	1.2821	2.335826	1.160136	1.185686	1.2821	2.587126	0.855999
sp|P0AFH7|OPPC_ECO57-VAIGGR	0.320212	3.98455	0.217692	0.365207	2.019728	0.4164	0.688735	0.392891	0.89162	0.4164	1.134803	0.636911
sp|B7MGS0|DPS_ECO45-NDVSDSEK	3.14217	5.078938	1.373675	0.403701	5.735711	9.3636	1.75214	0.276657	5.770619	9.3636	1.942711	0.369103
sp|P13035|GLPD_ECOLI-APLLSVFGGK	1.277169	0.39715	1.967149	0.28595	1.402663	0.4325	2.323388	1.374425	0.438437	0.4797	2.884046	6.375668
sp|P0AEY0|MALE_ECO57-IAATMENAQK	0.881818	1.6371	0.574113	0.545153	0.994784	1.6371	1.08272	1.071781	1.060404	1.0889	1.238093	1.487824
sp|B1IT06|RS6_ECOLC-QLAYPINK	1.861097	1.2616	1.27115	0.317058	1.897405	1.2616	1.182269	0.35262	1.897405	1.2616	1.516678	0.231961
sp|P08200|IDH_ECOLI-HPELTDMVIFR	0.894862	1.1487	0.856797	0.600538	1.034759	1.0732	1.42474	0.462922	1.13468	1.1487	1.175499	0.418053
sp|B1LNK7|GLYA_ECOSM-YPVYA	4.377968	1.239335	0.921677	1.832684	4.377968	0.955531	1.546206	1.919272	3.116679	0.7382	2.292503	1.972493
sp|P0AC39|ASPA_ECOL6-IEEDLLGTR	0.652302	1.7399	0.206228	1.185063	0.614007	1.4031	0.189297	1.496794	1.349155	1.7399	0.292009	1.598321
sp|P0A9B3|G3P_ECOL6-LTGMAFR	1.715842	1.0825	2.124966	1.346742	2.884819	0.3187	1.444102	1.275501	1.832432	0.3187	1.331249	1.275501
sp|B1IQH7|YAEH_ECOLC-SLGITNPEEIDR	0.667656	1.312855	0.607843	1.796798	1.384704	1.2648	1.032659	0.97517	1.411463	1.2648	1.130592	1.221921
sp|B7M1N4|RL3_ECO8A-VTVQSLDVVR	2.175889	1.606009	2.177479	0.094803	2.652937	1.855	2.398859	0.082432	2.856625	1.5938	3.941508	0.08351
sp|A7ZJD0|GPMA_ECO24-GFAVTPPELTK	0.061349	0.35255	1.129272	1.571749	1.146371	0.4148	1.047313	0.623238	1.240239	0.7492	1.583156	0.687026
sp|P0ACG0|HNS_ECO57-YSYVDENGETK	1.193844	0.9587	0.470683	1.388056	1.319899	0.9531	0.443301	1.05494	1.71634	1.0119	0.614225	0.684119
sp|A7ZS83|RL21_ECO24-AEVVAHGR	0.96824	0.610274	0.920543	2.157855	0.812388	0.5116	0.775713	0.927836	0.546138	0.5116	0.775713	0.927836
sp|P0ACA3|SSPA_ECOLI-ELTLWESR	3.844157	1.286	0.240684	0.191436	6.217255	1.286	0.769293	0.227432	6.217255	1.54805	0.124048	0.091113
sp|P0AFG5|ODO1_ECO57-QQQDLVNDALNVE	0.655152	0.8154	0.032585	4.956317	1.096557	1.2053	0.532826	3.793174	1.096557	1.2053	0.642498	1.458705

sp|A7ZV12|CH60_ECO24-AAVEEGVVAGGGVALIR	0.998393	1.03455	1.85342	0.766755	0.757299	0.8794	0.75907	0.587425	0.981832	0.8794	0.766576	0.69654
sp|B7N9S6|SYQ_ECOLU-GLAYVDELTPEQIR	0.598572	0.4894	1.552623	1.294501	0.65608	0.4699	1.552623	1.294501	0.643802	0.4699	1.552623	1.294501
sp|K0BE10|TAL_ECO1E-EHGYETVVMGASFR	0.212045	1.7315	0.735934	2.717461	0.688719	1.4346	0.684861	2.436359	0.711591	1.0642	0.77316	2.634269
sp|P38489|NFSB_ECOLI-SAAGNYVFNER	0.436337	0.60025	1.087987	1.573263	0.637216	0.60025	0.886589	0.97727	0.724264	0.60025	4.721006	1.16529
sp|P0AB82|ILVE_ECO57-WGWLDQVNQ	1.329655	0.957556	1.444875	0.756979	0.869448	1.003258	1.026774	0.661794	1.62803	0.991428	1.107388	0.633494
sp|P0A9A7|FTSZ_ECOL6-RPEITLVTNK	0.796716	0.750276	9.503839	6.895454	1.249087	0.635727	2.961224	1.335961	0.694691	0.172	2.369022	4.743619
sp|B7LA23|GLPK_ECO55-DGLEDYIR	0.644892	1.67865	1.155334	0.612265	0.597569	0.9812	0.837268	0.565297	0.933834	1.07735	1.062772	0.526092
sp|P0AG61|RS14_ECO57-GEIPGLK	1.168831	0.2319	0.836005	0.911977	1.381914	0.8481	0.968762	0.745751	0.414216	0.54145	1.105609	0.669767
sp|P37902|GLTI_ECOLI-QAAFSDTIFVVGTR	0.554098	0.6362	0.910362	11.97821	0.403467	0.8074	0.985223	0.946645	0.670598	0.7537	1.222483	0.809061
sp|P0AC41|SDHA_ECOLI-LDDGR	0.377132	1.897	1.396165	3.979546	0.313396	1.897	1.291178	19.51666	0.167323	1.897	1.291178	3.321749
sp|P00509|AAT_ECOLI-NFGLYNER	0.853042	1.1164	0.513972	1.993799	0.487629	1.1164	0.634547	1.786729	0.553947	0.9625	0.910068	1.327458
sp|A7ZUD3|TPIS_ECO24-DIGAQYIIIGHSER	1.760846	0.598255	0.968589	2.142109	1.760846	0.658865	0.98936	1.75815	1.294023	0.65955	0.904822	0.821276
sp|B7L4J7|RL5_ECO55-GNYSMGVR	0.709844	1.636454	1.596461	0.584196	1.558328	0.683006	1.479492	0.584196	1.662902	0.762285	1.479492	0.584196
sp|B1XB97|HSLU_ECODH-LLIEEEAAK	0.981934	0.5528	0.065318	0.995155	1.252668	1.5791	0.134586	0.845603	0.979145	1.41555	0.779347	1.319831
sp|P63285|CLPB_ECO57-NNPVLIGEPGVGK	0.853615	0.9752	1.335062	0.719953	0.778364	0.8853	0.907121	0.501347	0.697225	0.7789	1.077411	0.468881
sp|A7ZUM3|PUR9_ECO24-GVELLSTGGTAR	2.630577	0.857297	1.944194	1.157094	4.085489	0.725285	12.82537	1.334282	4.085489	0.3408	1.942743	0.642795
sp|P27302|TKT1_ECOLI-TEEQLANIAR	2.394312	1.4737	0.444173	0.683059	1.848745	1.517	0.376293	2.131511	0.316903	1.4737	0.557835	1.718889
sp|P60624|RL24_ECOLI-NVLSSGK	3.653531	1.9384	0.173452	1.213612	1.204026	3.2065	0.267637	0.528136	1.486455	1.0199	0.679888	0.421687
sp|A7ZIN4|KAD_ECO24-DDVTGEELTTR	1.511158	1.3456	1.379326	0.682601	1.294376	1.66505	1.379326	1.286389	1.758571	1.515	0.917209	0.991244

sp|P0A6A4|ACKA_ECOL6-LGVLGFEVDHER	1.091999	0.6949	1.272495	0.232153	1.142789	0.6949	1.029798	0.255789	1.584326	0.6811	2.903673	0.38664
sp|P0ACF1|DBHA_ECOL6-NPQTGK	2.260256	0.6398	1.729743	0.582428	3.360532	0.70665	1.127366	1.018394	2.169399	0.7735	0.95624	1.838352
sp|B7L6J2|SYT_ECO55-DAMFTTSSENR	1.004692	0.641793	0.705423	3.290292	8.079624	1.1215	0.665904	1.019165	2.035826	0.6798	1.076619	0.74599
sp|P0AG68|RS1_ECOL6-VTAVDAK	0.177636	1.3491	1.585116	1.247038	0.723139	1.41635	1.198461	0.74449	1.77464	1.41635	1.801004	0.67962

Table S2 The up- and down-regulated boundaries of mdCATs DIA quantification acquired from equally mixed pooled serum.

	Up-border	Low-border
1	1.22817726	0.77182274
2	1.26537114	0.73462886
3	1.24878224	0.75121776
4	1.34395305	0.65604695
5	1.32402135	0.67597865
6	1.29212899	0.70787101
7	1.22965322	0.77034678
8	1.21631817	0.78368183
9	1.2537667	0.74623331
10	1.2272334	0.7727666
11	1.32181333	0.67818667
12	1.31544869	0.68455131
13	1.29434109	0.70565891
14	1.29120688	0.70879312
15	1.20281265	0.79718735
16	1.25541023	0.74458977
17	1.21729554	0.78270447
18	1.30874683	0.69125317
19	1.23546627	0.76453373
20	1.27912793	0.72087207
21	1.28978196	0.71021804

Table S3 Proteins quantified from 21 human serum using mdCATs DIA strategy.

Protein_ID	Pep_seq	Protein_ID	Pep_seq	Protein_ID	Pep_seq
sp|P01009|A1AT_HUMAN	ITPNLAEFAFSLYR	sp|P02652|APOA2_HUMAN	AGTELVNFLSYFVELGTQPATQ	sp|P01876|IGHA1_HUMAN	TPLTATLSK
sp|P02774|VTDB_HUMAN	YTFELSR	sp|P04114|APOB_HUMAN	LNDLNSVLVMPTFHVPFTDLQVPSCK	sp|P06396|GELS_HUMAN	EVQGFESATFLGYFK
sp|P02671|FIBA_HUMAN	GSESGIFTNTK	sp|P69905|HBA_HUMAN	VDPVNFK	sp|P07360|CO8G_HUMAN	VQEAHLTEDQIFYFPK
sp|P01023|A2MG_HUMAN	LLIYAVLPTGDVIGDSAK	sp|P01024|CO3_HUMAN	AYYENSPQQVFSTEFEVK	sp|P0C0L5|CO4B_HUMAN	GHLFLQTDQPIYNPGQR
sp|P03952|KLKB1_HUMAN	LVGITSWGEGCAR	sp|P01042|KNG1_HUMAN	KLGQSLDCNAEVYVVPWEK	sp|P01008|ANT3_HUMAN	RVWELSK
sp|P02774|VTDB_HUMAN	HQPQEFPTYVEPTNDEICEAFR	sp|P0C0L5|CO4B_HUMAN	LTSLSDR	sp|P01877|IGHA2_HUMAN	SAVQGPPER
sp|P01876|IGHA1_HUMAN	DASGVTFTWTPSSGK	sp|P01024|CO3_HUMAN	LMNIFLK	sp|P08185|CBG_HUMAN	GTWTQPFDLASTR
sp|P02652|APOA2_HUMAN	EPCVESLVSQYFQTVTDYGKDLMEK	sp|P00747|PLMN_HUMAN	FSPATHPSEGLEENYCR	sp|P01859|IGHG2_HUMAN	STSESTAALGCLVK
sp|P02671|FIBA_HUMAN	ESSSHHPGIAEFPSR	sp|P02768|ALBU_HUMAN	AEFAEVSK	sp|P0DOX7|IGK_HUMAN	VDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSK
sp|P02655|APOC2_HUMAN	TAAQNLYEK	sp|P02649|APOE_HUMAN	LGADMEDVCGR	sp|P00751|CFAB_HUMAN	IDEIR
sp|P69905|HBA_HUMAN	VGAHAGEYGAEALER	sp|Q8NEM8|CBPC3_HUMAN	QLPNQGLAHCK	sp|P04114|APOB_HUMAN	EYSGTIASEANTYLNSK
sp|P04114|APOB_HUMAN	ALVDTLK	sp|P19652|A1AG2_HUMAN	YEGGR	sp|P02647|APOA1_HUMAN	AELQEGAR
sp|A0A0C4DH29|HV103_HUMAN	SEDTAVYYCAR	sp|P05090|APOD_HUMAN	VLNQELR	sp|P00747|PLMN_HUMAN	LFLEPTR
sp|P02768|ALBU_HUMAN	QNCELFEQLGEYK	sp|P01024|CO3_HUMAN	EYVLPSFEVIVEPTEK	sp|P01023|A2MG_HUMAN	IAQWQSFQLEGGLK
sp|P02787|TRFE_HUMAN	YLGEEYVK	sp|P68871|HBB_HUMAN	FFESFGDLSTPDAVMGNPK	sp|P04114|APOB_HUMAN	VHANPLLIDVVTYLVALIPEPSAQQLR
sp|P13671|CO6_HUMAN	ALNHLPLEYNSALYSR	sp|P01876|IGHA1_HUMAN	QEPSQGTTTFAVTSILR	sp|P04114|APOB_HUMAN	ATFQTPDFIVPLTDLR
sp|P01009|A1AT_HUMAN	SVLGQLGITK	sp|P04114|APOB_HUMAN	AEPLAFTFSHDYK	sp|P08603|CFAH_HUMAN	SSNLIILEEHLK
sp|P02649|APOE_HUMAN	AATVGSLAGQPLQER	sp|P02763|A1AG1_HUMAN	WFYIASAFR	sp|P01871|IGHM_HUMAN	LICQATGFSPR
sp|P0C0L5|CO4B_HUMAN	EPFLSCCQFAESLR	sp|P02771|FETA_HUMAN	LVLDVAHVHEHCCR	sp|P04114|APOB_HUMAN	IISDYHQQFR
sp|P01876|IGHA1_HUMAN	DLCGCYSVSSVLPGCAEPWNHG	sp|P02748|CO9_HUMAN	LSPIYNLVPVK	sp|P04114|APOB_HUMAN	FPEVDVLTK

	K				
sp|P04114|APOB_HUMAN	MLETVR	sp|P01871|IGHM_HUMAN	NVPLPVIAELPPK	sp|P06727|APOA4_HUMAN	ISASAEELR
sp|P02647|APOA1_HUMAN	VEPLR	sp|P04004|VTNC_HUMAN	FEDGVLDPDYPR	sp|P01024|CO3_HUMAN	QPSSAFAAFVK
sp|P08603|CFAH_HUMAN	KGEWVALNPLR	sp|P01782|HV309_HUMAN	FTISR	sp|P02768|ALBU_HUMAN	QNCELFEQLGEYKFQNALLVR
sp|P27169|PON1_HUMAN	YVYIAELLAHK	sp|P01859|IGHG2_HUMAN	EPQVYTLPPSR	sp|P02768|ALBU_HUMAN	VHTECCHGDLLECADDRADLAK
sp|O75636|FCN3_HUMAN	LLGEVDHYQLALGK	sp|P01031|CO5_HUMAN	EYVLPHFSVSIEPEYNFIGYK	sp|P01009|A1AT_HUMAN	SASLHLPK
sp|P04003|C4BPA_HUMAN	LMQCLPNPEDVK	sp|P01024|CO3_HUMAN	DYAGVFSDAGLTFTSSSGQQTAQR	sp|P04114|APOB_HUMAN	LLSGGNTLHLVSTTK
sp|P01024|CO3_HUMAN	SNLDEDIIAEENIVSR	sp|P00747|PLMN_HUMAN	EQQCVIMAENR	sp|P02671|FIBA_HUMAN	EVVTSEDGSDCPEAMDLGTLSGIGTLDGFR
sp|P02775|CXCL7_HUMAN	NIQSLEVIGK	sp|P0C0L5|CO4B_HUMAN	MRPSTDTITVMVENSHGLR	sp|P01861|IGHG4_HUMAN	EPQVYTLPPSQEEMTK
sp|P0C0L4|CO4A_HUMAN	TLEIPGNSDPNMIPDGDFNSYVR	sp|P01031|CO5_HUMAN	DVFLEMNIPYSVVR	sp|P05546|HEP2_HUMAN	NYNLVESLK
sp|P02774|VTDB_HUMAN	EVVSLTEACCAEGADPDCYDTR	sp|P04114|APOB_HUMAN	EIFNMAR	sp|P01871|IGHM_HUMAN	FTCTVTHTDLPSPLK
sp|Q9H1C0|LPAR5_HUMAN	LVAASVPAR	sp|P02655|APOC2_HUMAN	TYLPAVDEK	sp|P04114|APOB_HUMAN	VSALLTPAEQTGTWK
sp|P08603|CFAH_HUMAN	EGWIHTVCINGR	sp|P02652|APOA2_HUMAN	KAGTELVNFLSYFVELGTQPATQ	sp|O43866|CD5L_HUMAN	CSGEEQSLEQCQHR
sp|P02768|ALBU_HUMAN	CCAAADPHECYAK	sp|P04003|C4BPA_HUMAN	GYILVGQAK	sp|Q14624|ITIH4_HUMAN	DQFNLIVFSTEATQWRPSLVPASAENVNK
sp|P00747|PLMN_HUMAN	EAQLPVIENK	sp|P07358|CO8B_HUMAN	SVFLHAR	sp|P0C0L4|CO4A_HUMAN	GLEEELQFSLGSK
sp|P08603|CFAH_HUMAN	SCDIPVFMNAR	sp|P0DOX2|IGA2_HUMAN	VAAEDWK	sp|P0DOX2|IGA2_HUMAN	DLCGCYSVSSVLPGCAQPWNHGETFTCTAAHPELK
sp|P01024|CO3_HUMAN	TFISPIK	sp|P01859|IGHG2_HUMAN	GFYPSDISVEWESNGQPENNYK	sp|P01024|CO3_HUMAN	IHWESASLLR
sp|P01024|CO3_HUMAN	VTIKPAPETEK	sp|P01024|CO3_HUMAN	RIPIEDGSGEVVLSR	sp|P02751|FINC_HUMAN	EESPLLIGQQSTVSDVPR
sp|P02656|APOC3_HUMAN	DYWSTVK	sp|A0A0A0MS15|HV349_HUMAN	GLEWVGFIR	sp|P02787|TRFE_HUMAN	MYLGYEYVTAIR
sp|P02787|TRFE_HUMAN	EGYYGYTGAFR	sp|P00751|CFAB_HUMAN	DAQYAPGYDK	sp|P06727|APOA4_HUMAN	LNHQLEGLTFQMK
sp|P01772|HV333_HUMAN	FTISR	sp|P01042|KNG1_HUMAN	YFIDFVAR	sp|P00751|CFAB_HUMAN	QLNEINYEDHK
sp|P02647|APOA1_HUMAN	DYVSQFEGSALGK	sp|P0C0L5|CO4B_HUMAN	LELSVDGAK	sp|P0DJI8|SAA1_HUMAN	EANYIGSDK
sp|P01042|KNG1_HUMAN	EGDCPVQSGK	sp|P01024|CO3_HUMAN	VSHSEDDCLAFK	sp|Q08380|LG3BP_HUMA	ELSEALGQIFDSQR

Protein	Peptide	Protein	Peptide	Protein	Peptide
sp|P0C0L4|CO4A_HUMAN	LLLFSPSVVHLGVPLSVGVQLQDVPR	sp|P00734|THRB_HUMAN	ETAASLLQAGYK	sp|P00738|HPT_HUMAN	LPECEAVCGKPK
sp|P01024|CO3_HUMAN	TIYTPGSTVLYR	sp|A0A0B4J1Y9|HV372_HUMAN	GLEWVGR	sp|P01031|CO5_HUMAN	DGHVILQLNSIPSSDFLCVR
sp|P02649|APOE_HUMAN	LASHLR	sp|Q86V48|LUZP1_HUMAN	IMGGSGTETTLEK	sp|P19827|ITIH1_HUMAN	QAVDTAVDGVFIR
sp|P0C0L5|CO4B_HUMAN	ASAGLLGAHAAAITAYALTLTK	sp|P00747|PLMN_HUMAN	VVGGCVAHPHSWPWQVSLR	sp|P04003|C4BPA_HUMAN	LNNGEITQHR
sp|P00734|THRB_HUMAN	SEGSSVNLSPPLEQCVPDR	sp|P02790|HEMO_HUMAN	LYLVQGTQVYVFLTK	sp|P02749|APOH_HUMAN	VSFFCK
sp|P02751|FINC_HUMAN	RPGGEPSPEGTTGQSYNQYSQR	sp|P0DOY2|IGLC2_HUMAN	AAPSVTLFPPSSEELQANK	sp|P02768|ALBU_HUMAN	RHPYFYAPELLFFAKR
sp|P02749|APOH_HUMAN	EHSSLAFWK	sp|P01031|CO5_HUMAN	GLLVGEILSAVLSQEGINILTHLPK	sp|P0C0L5|CO4B_HUMAN	GSFEFPVGDAVSK
sp|P01009|A1AT_HUMAN	LSITGTYDLK	sp|P27169|PON1_HUMAN	IFFYDSENPPASEVLR	sp|P04114|APOB_HUMAN	GMALFGEGK
sp|P00751|CFAB_HUMAN	YGLVTYATYPK	sp|P0C0L5|CO4B_HUMAN	DFALLSLQVPLKDAK	sp|P10643|CO7_HUMAN	GCPTEEGCGER
sp|P0C0L5|CO4B_HUMAN	GPEVQLVAHSPWLK	sp|P01023|A2MG_HUMAN	EQAPHCICANGR	sp|P02768|ALBU_HUMAN	TCVADESAENCDK
sp|P02771|FETA_HUMAN	QKPQITEEQLEAVIADFSGLLEK	sp|P01602|KV105_HUMAN	VTITCR	sp|P02774|VTDB_HUMAN	THLPEVFLSK
sp|P00738|HPT_HUMAN	VMPICLPSK	sp|P00734|THRB_HUMAN	IVEGSDAEIGMSPWQVMLFR	sp|P0DOX5|IGG1_HUMAN	STSGGTAALGCLVK
sp|P02768|ALBU_HUMAN	DLGEENFK	sp|P04217|A1BG_HUMAN	VTLTCVAPLSGVDFQLR	sp|P01023|A2MG_HUMAN	QGIPFFGQVR
sp|P02787|TRFE_HUMAN	DSAHGFLK	sp|P01024|CO3_HUMAN	DQLTCNK	sp|P00450|CERU_HUMAN	NNEGTYYSPNYNPQSR
sp|P0DOX5|IGG1_HUMAN	DELTK	sp|P0DOX6|IGM_HUMAN	LICQATGFSPR	sp|P04114|APOB_HUMAN	AVSMPSFSILGSDVR
sp|P68871|HBB_HUMAN	GTFATLSELHCDK	sp|P01024|CO3_HUMAN	VFLDCCNYITELR	sp|P01009|A1AT_HUMAN	LGMFNIQHCK
sp|P0C0L5|CO4B_HUMAN	VDVQAGACEGK	sp|P01031|CO5_HUMAN	ESYSGVTLDPR	sp|P19652|A1AG2_HUMAN	DKCEPLEK
sp|P01700|LV147_HUMAN	RPSGVPDR	sp|P68871|HBB_HUMAN	VNVDEVGGEALGR	sp|P01024|CO3_HUMAN	WLILEK
sp|P01019|ANGT_HUMAN	QPFVQGLALYTPVVLPR	sp|P04114|APOB_HUMAN	VPSYTLILPSLELPVLHVPR	sp|P00738|HPT_HUMAN	DIAPTLTLYVGK
sp|P00734|THRB_HUMAN	AIEGR	sp|P19652|A1AG2_HUMAN	TLMFGSYLDDEK	sp|P04114|APOB_HUMAN	LSLESLTSYFSIESSTK
sp|P02768|ALBU_HUMAN	HPDYSVVLLLR	sp|P0C0L5|CO4B_HUMAN	LNMGITDLQGLR	sp|P01023|A2MG_HUMAN	VDSHFR
sp|P01011|AACT_HUMAN	GTHVDLGLASANVDFAFSLYK	sp|P0DOX6|IGM_HUMAN	DGFFGNPR	sp|P0DOX5|IGG1_HUMAN	CPAPELLGGPSVFLFPPKPK
sp|P01031|CO5_HUMAN	IDTQDIEASHYR	sp|P02671|FIBA_HUMAN	DSHSLTTNIMEILR	sp|P01876|IGHA1_HUMAN	GDTFSCMVGHEALPLAFTQK

sp|P02766|TTHY_HUMAN	GSPAINVAVHVFR	sp|A0M8Q6|IGLC7_HUMAN	AAPSVTLFPPSSEELQANK	sp|P06727|APOA4_HUMAN	IDQTVEELR
sp|P02787|TRFE_HUMAN	SVIPSDGPSVACVK	sp|P36955|PEDF_HUMAN	EIPDEISILLLGVAHFK	sp|P00738|HPT_HUMAN	TEGDGVYTLNDK
sp|P0DOX6|IGM_HUMAN	ESGPTTYK	sp|P25311|ZA2G_HUMAN	EIPAWVPFDPAAQITK	sp|P04114|APOB_HUMAN	FIIPGLK
sp|P00450|CERU_HUMAN	SVPPSASHVAPTETFTYEWTVPK	sp|P04114|APOB_HUMAN	VPLLLSEPINIIDALEMR	sp|P01019|ANGT_HUMAN	AAMVGMLANFLGFR
sp|P01024|CO3_HUMAN	VVLVAVDK	sp|P01876|IGHA1_HUMAN	KGDTFSCMVGHEALPLAFTQK	sp|P05543|THBG_HUMAN	AVLHIGEK
sp|P04114|APOB_HUMAN	LVTELR	sp|P0DOX5|IGG1_HUMAN	GFYPSDIAVEWESNGQPENNYK	sp|P01023|A2MG_HUMAN	DNGCFR
sp|P0DOX6|IGM_HUMAN	GVALHRPDVYLLPPAR	sp|P04003|C4BPA_HUMAN	GVGWSHPLPQCEIVK	sp|P02741|CRP_HUMAN	ESDTSYVSLK
sp|P02771|FETA_HUMAN	GYQELLEK	sp|P04114|APOB_HUMAN	AHLNIK	sp|P01011|AACT_HUMAN	DSLEFR
sp|P02768|ALBU_HUMAN	EFNAETFTFHADICTLSEK	sp|P04114|APOB_HUMAN	AHLDIAGSLEGHLR	sp|P02790|HEMO_HUMAN	NFPSPVDAAFR
sp|P19823|ITIH2_HUMAN	TILDDLR	sp|P02671|FIBA_HUMAN	GGSTSYGTGSETESPR	sp|A0A0C4DH72|KV106_HUMAN	LIYAASSLQSGVPSR
sp|P04114|APOB_HUMAN	GIISALLVPPETEEAK	sp|P02768|ALBU_HUMAN	AWAVAR	sp|P02766|TTHY_HUMAN	TSESGELHGLTTEEEFVEGIYK
sp|P01619|KV320_HUMAN	ATGIPDR	sp|P01023|A2MG_HUMAN	ETTFNSLLCPSGGEVSEELSLK	sp|P02768|ALBU_HUMAN	DLGEENFKALVLIAFAQYLQQCPFEDHVK
sp|P04217|A1BG_HUMAN	NGVAQEPVHLDSPAIK	sp|P35542|SAA4_HUMAN	AYWDIMISNHQNSNR	sp|P01024|CO3_HUMAN	DSCVGSLVVK
sp|P08603|CFAH_HUMAN	EQVQSCGPPPELLNGNVK	sp|P00738|HPT_HUMAN	VSVNER	sp|P02751|FINC_HUMAN	VPGTSTSATLTGLTR
sp|P01024|CO3_HUMAN	IPIEDGSGEVVLSR	sp|P01860|IGHG3_HUMAN	SCDTPPPCPR	sp|P15169|CBPN_HUMAN	EALIQFLEQVHQGIK
sp|P01023|A2MG_HUMAN	LVHVEEPHTETVR	sp|P02768|ALBU_HUMAN	HPYFYAPELLFFAK	sp|P08603|CFAH_HUMAN	TDCLSLPSFENAIPMGEK
sp|P01042|KNG1_HUMAN	IASFSQNCDIYPGK	sp|A0A0J9YX35|HV64D_HUMAN	FTISR	sp|P02748|CO9_HUMAN	VVEESELAR
sp|A0A0A0MS15|HV349_HUMAN	FTISR	sp|P0C0L4|CO4A_HUMAN	LLATLCSAEVCQCAEGK	sp|P02649|APOE_HUMAN	SWFEPLVEDMQR
sp|P02768|ALBU_HUMAN	AVMDDFAAFVEK	sp|P0C0L4|CO4A_HUMAN	SMQGGLVGNDETVALTAFVTIALHHGLAVFQDEGAEPLK	sp|P68871|HBB_HUMAN	VVAGVANALAHK
sp|P02647|APOA1_HUMAN	EQLGPVTQEFWDNLEKETEGLR	sp|P00738|HPT_HUMAN	FTDHLK	sp|P05543|THBG_HUMAN	GWVDLFVPK
sp|P01023|A2MG_HUMAN	TEVSSNHVLIYLDK	sp|P01023|A2MG_HUMAN	QTVSWAVTPK	sp|P06310|KV230_HUMAN	DSGVPDR
sp|P01834|IGKC_HUMAN	TVAAPSVFIFPPSDEQLK	sp|P0DOX5|IGG1_HUMAN	GPSVFPLAPSSK	sp|P01024|CO3_HUMAN	LVLSSEK
sp|P02748|CO9_HUMAN	RPWNVASLIYETK	sp|P10643|CO7_HUMAN	EQTMSECEAGALR	sp|P02751|FINC_HUMAN	LGVRPSQGGEAPR

sp|P02766|TTHY_HUMAN	RYTIAALLSPYSYSTTAVVTNPK	sp|P01008|ANT3_HUMAN	EQLQDMGLVDLFSPEK	sp|P0C0L5|CO4B_HUMAN	SHALQLNNR
sp|P0DOX7|IGK_HUMAN	VDNALQSGNSQESVTEQDSK	sp|P68871|HBB_HUMAN	LLVVYPWTQR	sp|P05155|IC1_HUMAN	TLYSSSPR
sp|P02775|CXCL7_HUMAN	LAGDESAD	sp|P01024|CO3_HUMAN	VVLVSLQSGYLFIQTDK	sp|P00751|CFAB_HUMAN	LEDSVTYHCSR
sp|P01599|KV117_HUMAN	VTITCR	sp|P02751|FINC_HUMAN	DLEVVAATPTSLLISWDAPAVTVR	sp|P0C0L4|CO4A_HUMAN	VETVDR
sp|P04114|APOB_HUMAN	ILGEELGFASLHDLQLLGK	sp|P02787|TRFE_HUMAN	DLLFRDDTVCLAK	sp|P02768|ALBU_HUMAN	KYLYEIAR
sp|P0C0L4|CO4A_HUMAN	LNMGITDLQGLR	sp|P01860|IGHG3_HUMAN	ALPAPIEK	sp|P02751|FINC_HUMAN	EINLAPDSSSVVVSGLMVATK
sp|P00739|HPTR_HUMAN	TEGDGVYTLNDK	sp|P00450|CERU_HUMAN	TTIEKPVWLGFLGPIIK	sp|P0C0L4|CO4A_HUMAN	EELVYELNPLDHR
sp|P00738|HPT_HUMAN	TEGDGVYTLNNEK	sp|P01031|CO5_HUMAN	DINYVNPVIK	sp|P02042|HBD_HUMAN	LLVVYPWTQR
sp|P10909|CLUS_HUMAN	ALQEYR	sp|P01009|A1AT_HUMAN	RLGMFNIQHCK	sp|P02652|APOA2_HUMAN	SPELQAEAK
sp|P19827|ITIH1_HUMAN	GHMLENHVER	sp|Q14624|ITIH4_HUMAN	TGLLLLSDPDK	sp|P02768|ALBU_HUMAN	FKDLGEENFK
sp|P01619|KV320_HUMAN	FSGSGSGTDFTLTISR	sp|P02768|ALBU_HUMAN	CCTESLVNR	sp|P02647|APOA1_HUMAN	LSPLGEEMR
sp|P01024|CO3_HUMAN	FYYIYNEK	sp|P01859|IGHG2_HUMAN	GLPAPIEK	sp|P43652|AFAM_HUMAN	IAPQLSTEELVSLGEK
sp|P01031|CO5_HUMAN	GTVYNYR	sp|P02768|ALBU_HUMAN	AAFTECCQAADK	sp|P0DOY2|IGLC2_HUMAN	TVAPTECS
sp|P01877|IGHA2_HUMAN	YLTWASR	sp|P01024|CO3_HUMAN	DICEEQVNSLPGSITK	sp|P00450|CERU_HUMAN	LISVDTEHSNIYLQNGPDR
sp|P01024|CO3_HUMAN	QPVPGQQMTLK	sp|P08603|CFAH_HUMAN	CFEGFGIDGPAIAK	sp|P01042|KNG1_HUMAN	TVGSDTFYSFK
sp|P01011|AACT_HUMAN	AVLDVFEEGTEASAATAVK	sp|Q9UGM5|FETUB_HUMAN	GGLGSLFYLTLDVLETDCHVLR	sp|P02768|ALBU_HUMAN	LVTDLTK
sp|P01011|AACT_HUMAN	ADLSGITGAR	sp|P01861|IGHG4_HUMAN	GFYPSDIAVEWESNGQPENNYK	sp|A0A0B4J1X5|HV374_HUMAN	FTISR
sp|P04114|APOB_HUMAN	SVSDGIAALDLNAVANK	sp|P02774|VTDB_HUMAN	HLSLLTTLSNR	sp|P10909|CLUS_HUMAN	ASSIIDELFQDR
sp|P0DOX6|IGM_HUMAN	QVGSGVTTDQVQAEAK	sp|P0C0L5|CO4B_HUMAN	GLEEELQFSLGSK	sp|P19827|ITIH1_HUMAN	AAISGENAGLVR
sp|P00751|CFAB_HUMAN	ALFVSEEEK	sp|P00450|CERU_HUMAN	ERGPEEEHLGILGPVIWAEVGDTIR	sp|P01861|IGHG4_HUMAN	STSESTAALGCLVK
sp|P0DOX8|IGL1_HUMAN	ATLVCLISDFYPGAVTVAWK	sp|P02751|FINC_HUMAN	NLQPASEYTVSLVAIK	sp|P01024|CO3_HUMAN	QLYNVEATSYALLALLQLK
sp|P01024|CO3_HUMAN	VQLSNDFDEYIMAIEQTIK	sp|P02775|CXCL7_HUMAN	ICLDPDAPR	sp|P01834|IGKC_HUMAN	VDNALQSGNSQESVTEQDSK
sp|P01011|AACT_HUMAN	DYNLNDILLQLGIEEAFTSK	sp|P68871|HBB_HUMAN	VLGAFSDGLAHLDNLK	sp|P08519|APOA_HUMAN	GTYSTTVTGR
sp|O43866|CD5L_HUMAN	LADGPGHCK	sp|P02768|ALBU_HUMAN	SLHTLFGDKLCTVATLR	sp|P0DOX5|IGG1_HUMAN	DTLMISR

sp|P02749|APOH_HUMAN	TCPKPDDLPFSTVVPLK	sp|P08603|CFAH_HUMAN	SIDVACHPGYALPK	sp|P02768|ALBU_HUMAN	RHPYFYAPELLFFAK
sp|P02790|HEMO_HUMAN	SLGPNSCSANGPGLYLIHGPNLYCYSDVEK	sp|P02768|ALBU_HUMAN	EFNAETFTFHADICTLSEKER	sp|P01023|A2MG_HUMAN	YNILPEKEEFPFALGVQTLPQTCDEPK
sp|P04003|C4BPA_HUMAN	DTIVFK	sp|P08603|CFAH_HUMAN	EEYGHSEVVEYYCNPR	sp|P01031|CO5_HUMAN	SYFPESWLWEVHLVPR
sp|A0A0C4DH68|KV224_HUMAN	FSGVPDR	sp|P04004|VTNC_HUMAN	DWHGVPGQVDAAMAGR	sp|A0A0C4DH67|KV108_HUMAN	LLIYAASTLQSGVPSR
sp|P02765|FETUA_HUMAN	ATLSEK	sp|P02768|ALBU_HUMAN	LAKTYETTLEK	sp|Q14624|ITIH4_HUMAN	LWAYLTIQQLLEQTVSASDADQQALR
sp|A0A0C4DH29|HV103_HUMAN	DTSASTAYMELSSLR	sp|P01008|ANT3_HUMAN	TSDQIHFFFAK	sp|P0DOY2|IGLC2_HUMAN	YAASSYLSLTPEQWK
sp|O43866|CD5L_HUMAN	LVGGDNLCSGR	sp|P0C0L5|CO4B_HUMAN	LPMSVR	sp|P02746|C1QB_HUMAN	FDHVITNMNNNYEPR
sp|P01024|CO3_HUMAN	KGYTQQLAFR	sp|P01861|IGHG4_HUMAN	WQEGNVFSCSVMHEALHNHYTQK	sp|P01024|CO3_HUMAN	RAPSTWLTAYVVK
sp|P0C0L4|CO4A_HUMAN	DSSTWLTAFVLK	sp|P02765|FETUA_HUMAN	VWPQQPSGELFEIEIDTLETTCHVLDPTPVAR	sp|P00739|HPTR_HUMAN	DIAPTLTLYVGK
sp|P0C0L4|CO4A_HUMAN	VTASDPLDTLGSEGALSPGGVASLLR	sp|P05090|APOD_HUMAN	CPNPPVQENFDVNK	sp|P01024|CO3_HUMAN	DMALTAFVLISLQEAK
sp|P02790|HEMO_HUMAN	GECQAEGVLFFQGDR	sp|P04114|APOB_HUMAN	DFSLWEK	sp|P01861|IGHG4_HUMAN	TTPPVLDSDGSFFLYSR
sp|P35858|ALS_HUMAN	LAYLQPALFSGLAELR	sp|P0C0L4|CO4A_HUMAN	RGHLFLQTDQPIYNPGQR	sp|P10909|CLUS_HUMAN	FMETVAEK
sp|P02771|FETA_HUMAN	YIQESQALAK	sp|P43652|AFAM_HUMAN	DADPDTFFAK	sp|P01743|HV146_HUMAN	DTSTSTVYMELSSLR
sp|P01023|A2MG_HUMAN	TFAQAR	sp|P06312|KV401_HUMAN	ESGVPDR	sp|P00739|HPTR_HUMAN	LRTEGDGVYTLNDK
sp|P06727|APOA4_HUMAN	LVPFATELHER	sp|Q14624|ITIH4_HUMAN	YIFHNFMER	sp|P02790|HEMO_HUMAN	LLQDEFPGIPSPLDAAVECHR
sp|P01023|A2MG_HUMAN	YGAATFTR	sp|P02774|VTDB_HUMAN	SLGECCDVEDSTTCFNAK	sp|P04114|APOB_HUMAN	ESDEETQIK
sp|P19823|ITIH2_HUMAN	SSALDMENFR	sp|P02790|HEMO_HUMAN	GEFVWK	sp|P05546|HEP2_HUMAN	NFGYTLR
sp|P01019|ANGT_HUMAN	ALQDQLVLVAAK	sp|P01009|A1AT_HUMAN	VFSNGADLSGVTEEAPLK	sp|P19823|ITIH2_HUMAN	HLEVDVWVIEPQGLR
sp|P04114|APOB_HUMAN	TEVIPPLIENR	sp|P06727|APOA4_HUMAN	ALVQQMEQLR	sp|P19823|ITIH2_HUMAN	AHVSFKPTVAQQR
sp|P02787|TRFE_HUMAN	SKEFQLFSSPHGK	sp|P02766|TTHY_HUMAN	KAADDTWEPFASGK	sp|P02787|TRFE_HUMAN	EACVHK
sp|P01861|IGHG4_HUMAN	DTLMISR	sp|P01023|A2MG_HUMAN	VGFYESDVMGR	sp|P02649|APOE_HUMAN	WVQTLSEQVQEELLSSQVTQELR
sp|Q92985|IRF7_HUMAN	AWAVAR	sp|P01024|CO3_HUMAN	CAEENCFIQK	sp|P04196|HRG_HUMAN	IADAHLDR
sp|P19823|ITIH2_HUMAN	LGSYEHR	sp|P00450|CERU_HUMAN	DLYSGLIGPLIVCR	sp|P05156|CFAI_HUMAN	GLETSLAECTFTK

sp|P27169|PON1_HUMAN	EVQPVELPNCNLVK	sp|P02741|CRP_HUMAN	GYSIFSYATK	sp|P01871|IGHM_HUMAN	GFPSVLR
sp|P02787|TRFE_HUMAN	EDLIWELLNQAQEHFGKDK	sp|Q6Q759|SPG17_HUMAN	VVIVERK	sp|P01042|KNG1_HUMAN	DIPTNSPELEETLTHTITK
sp|P0C0L4|CO4A_HUMAN	VEYGFQVK	sp|P02768|ALBU_HUMAN	DAHKSEVAHR	sp|A0A0C4DH72|KV106_HUMAN	VTITCR
sp|P01859|IGHG2_HUMAN	DTLMISR	sp|P04114|APOB_HUMAN	QVFLYPEKDEPTYILNIK	sp|P02750|A2GL_HUMAN	LHLEGNK
sp|P01859|IGHG2_HUMAN	VVSVLTVVHQDWLNGK	sp|P0C0L4|CO4A_HUMAN	YVSHFETEGPHVLLYFDSVPTSR	sp|P02768|ALBU_HUMAN	ADLAK
sp|P01042|KNG1_HUMAN	ICVGCPR	sp|A0A075B6P5|KV228_HUMAN	ASGVPDR	sp|P01024|CO3_HUMAN	KQELSEAEQATR
sp|P0C0L4|CO4A_HUMAN	YVLPNFEVK	sp|P08603|CFAH_HUMAN	GEWVALNPLR	sp|P01871|IGHM_HUMAN	ESDWLGQSMFTCR
sp|P06727|APOA4_HUMAN	EAVEHLQK	sp|P0C0L5|CO4B_HUMAN	DHAVDLIQK	sp|P02741|CRP_HUMAN	RQDNEILIFWSK
sp|P10909|CLUS_HUMAN	IDSLLENDR	sp|P02765|FETUA_HUMAN	QPNCDDPETEEAALVAIDYINQNLPWGYK	sp|P01024|CO3_HUMAN	GVFVLNK
sp|O43866|CD5L_HUMAN	LVGGLHR	sp|P01009|A1AT_HUMAN	DTEEEDFHVDQVTTVK	sp|P05156|CFAI_HUMAN	VFSLQWGEVK
sp|P00450|CERU_HUMAN	ALYLQYTDETFR	sp|P01876|IGHA1_HUMAN	DVLVR	sp|P01023|A2MG_HUMAN	AIGYLNTGYQR
sp|P0C0L5|CO4B_HUMAN	VTASDPLDTLGSEGALSPGGVASLLR	sp|P04114|APOB_HUMAN	HLIDSLIDFLNFPR	sp|P02768|ALBU_HUMAN	SHCIAEVENDEMPADLPSLAADFVESK
sp|Q14624|ITIH4_HUMAN	GSEMVVAGK	sp|P02751|FINC_HUMAN	GEWTCIAYSQLR	sp|P01023|A2MG_HUMAN	TGTHGLLVK
sp|P00450|CERU_HUMAN	EFYLFPTVFDENESLLLEDNIR	sp|P69905|HBA_HUMAN	MFLSFPTTK	sp|P00738|HPT_HUMAN	YVMLPVADQDQCIR
sp|P04114|APOB_HUMAN	LPQQANDYLNSFNWER	sp|P01876|IGHA1_HUMAN	SVTCHVK	sp|P02763|A1AG1_HUMAN	YVGGQEHFAHLLILR
sp|P02763|A1AG1_HUMAN	EQLGEFYEALDCLR	sp|P04114|APOB_HUMAN	TLQGIPQMIGEVIR	sp|P01860|IGHG3_HUMAN	LTVDK
sp|P04004|VTNC_HUMAN	SIAQYWLGCPAPGHL	sp|P01024|CO3_HUMAN	KVEGTAFVIFGIQDGEQR	sp|P08603|CFAH_HUMAN	VSVLCQENYLIQEGEEITCK
sp|P02790|HEMO_HUMAN	ELISER	sp|P0C0L5|CO4B_HUMAN	VLSLAQEQVGGSPEK	sp|P02771|FETA_HUMAN	GQCIIHAENDEKPEGLSPNLNR
sp|P04114|APOB_HUMAN	QAEAVLK	sp|P0C0L4|CO4A_HUMAN	ASAGLLGAHAAAITAYALTLTK	sp|P01024|CO3_HUMAN	SEETKENEGFTVTAEGK
sp|P01008|ANT3_HUMAN	DIPMNPMCIYR	sp|P19823|ITIH2_HUMAN	ALYAQAR	sp|P08603|CFAH_HUMAN	IDVHLVPDR
sp|P02787|TRFE_HUMAN	DSSLCK	sp|P00450|CERU_HUMAN	HYYIGIIETTWDYASDHGEK	sp|P02768|ALBU_HUMAN	LDELRDEGK
sp|P00747|PLMN_HUMAN	WELCDIPR	sp|P02768|ALBU_HUMAN	YLYEIAR	sp|P02771|FETA_HUMAN	GDVLDCLQDGEK
sp|P01861|IGHG4_HUMAN	GLPSSIEK	sp|P04114|APOB_HUMAN	EVGTVLSQVYSK	sp|P02787|TRFE_HUMAN	EDPQTFYYAVAVVK
sp|P00734|THRB_HUMAN	VIDQFGE	sp|P0DOX6|IGM_HUMAN	ESDWLGESMFTCR	sp|P02771|FETA_HUMAN	QEFLINLVK

Protein	Peptide	Protein	Peptide	Protein	Peptide
sp|P0DOX5|IGG1_HUMAN	FTISR	sp|P00747|PLMN_HUMAN	NPDGDVGGPWCYTTNPR	sp|P02771|FETA_HUMAN	CCQGQEQEVCFAEEGQK
sp|P01023|A2MG_HUMAN	GEAFTLK	sp|P02775|CXCL7_HUMAN	GKEESLDSDLYAELR	sp|P04114|APOB_HUMAN	DNVFDGLVR
sp|P02768|ALBU_HUMAN	ETCFAEEGK	sp|P02768|ALBU_HUMAN	MPCAEDYLSVVLNQLCVLHEK	sp|P04217|A1BG_HUMAN	FALVR
sp|P02787|TRFE_HUMAN	IECVSAETTEDCIAK	sp|P0C0L4|CO4A_HUMAN	SCGLHQLLR	sp|Q8NGF3|O51D1_HUMAN	IGLSALTR
sp|P02790|HEMO_HUMAN	RLWWLDLK	sp|P01023|A2MG_HUMAN	AHTSFQISLSVSYTGSR	sp|P02787|TRFE_HUMAN	SCHTGLGR
sp|P01024|CO3_HUMAN	TLDPER	sp|P0DOY2|IGLC2_HUMAN	ADSSPVK	sp|P01024|CO3_HUMAN	VHQYFNVELIQPGAVK
sp|P06727|APOA4_HUMAN	SELTQQLNALFQDK	sp|P10909|CLUS_HUMAN	EILSVDCSTNNPSQAK	sp|P0C0L5|CO4B_HUMAN	LQETSNWLLSQQQADGSFQDLSPVIHR
sp|P19823|ITIH2_HUMAN	KLWAYLTINQLLAER	sp|P01024|CO3_HUMAN	IWDVVEK	sp|P43652|AFAM_HUMAN	ESLLNHFLYEVAR
sp|P02790|HEMO_HUMAN	YYCFQGNQFLR	sp|P05155|IC1_HUMAN	TNLESILSYPK	sp|A0A0A0MT36|KVD21_HUMAN	VTITCR
sp|P01861|IGHG4_HUMAN	NQVSLTCLVK	sp|P02655|APOC2_HUMAN	STAAMSTYTGIFTDQVLSVLK	sp|P01008|ANT3_HUMAN	EVPLNTIIFMGR
sp|P01023|A2MG_HUMAN	DMYSFLEDMGLK	sp|P02768|ALBU_HUMAN	LVNEVTEFAK	sp|P0DOX6|IGM_HUMAN	EQLNLR
sp|P01031|CO5_HUMAN	IIHFGTR	sp|P00751|CFAB_HUMAN	DISEVVTPR	sp|P0C0L4|CO4A_HUMAN	LPMSVR
sp|P08603|CFAH_HUMAN	SSQESYAHGTK	sp|P06727|APOA4_HUMAN	LGPHAGDVEGHLSFLEK	sp|P0C0L4|CO4A_HUMAN	GQIVFMNR
sp|P0C0L4|CO4A_HUMAN	AAANQMR	sp|P10643|CO7_HUMAN	ELSHLPSLYDYSAYR	sp|P0C0L5|CO4B_HUMAN	AACAQLNDFLQEYGTQGCQV
sp|P05155|IC1_HUMAN	VTTSQDMLSIMEK	sp|P01700|LV147_HUMAN	SGTSASLAISGLR	sp|P04217|A1BG_HUMAN	LELHVDGPPPRPQLR
sp|P04003|C4BPA_HUMAN	EDVYVVGTVLR	sp|P02768|ALBU_HUMAN	RPCFSALEVDETYVPK	sp|P01042|KNG1_HUMAN	AATGECTATVGK
sp|P02753|RET4_HUMAN	LLNLDGTCADSYSFVFSR	sp|P0DJI8|SAA1_HUMAN	FFGHGAEDSLADQAANEWGR	sp|P04003|C4BPA_HUMAN	QSSSYSFFK
sp|P02042|HBD_HUMAN	LHVDPENFR	sp|P02654|APOC1_HUMAN	EWFSETFQK	sp|P04114|APOB_HUMAN	NIQEYLSILTDPDGK
sp|P25311|ZA2G_HUMAN	WEAEPVYVQR	sp|P01011|AACT_HUMAN	EIGELYLPK	sp|P01023|A2MG_HUMAN	QSSEITR
sp|P02768|ALBU_HUMAN	ETCFAEEGKK	sp|P01024|CO3_HUMAN	ACEPGVDYVYK	sp|P01023|A2MG_HUMAN	NEDSLVFVQTDK
sp|Q14624|ITIH4_HUMAN	VQGNDHSATR	sp|P01024|CO3_HUMAN	VELLHNPAFCSLATTK	sp|P00736|C1R_HUMAN	LPVANPQACENWLR
sp|P02748|CO9_HUMAN	DVVLTTTFVDDIK	sp|P35542|SAA4_HUMAN	GNYDAAQR	sp|P02787|TRFE_HUMAN	KDSGFQMNQLR
sp|P13671|CO6_HUMAN	DLHLSDVFLK	sp|P01019|ANGT_HUMAN	VLSALQAVQGLLVAQGR	sp|P0DOX5|IGG1_HUMAN	ALPAPIEK
sp|A0A0C4DH31|HV118_HUM	SDDTAVYYCAR	sp|Q14624|ITIH4_HUMAN	ETLFSVMPGLK	sp|P00739|HPTR_HUMAN	QLVEIEK

AN

sp|P01591|IGJ_HUMAN	IIVPLNNR	sp|P0DJI8|SAA1_HUMAN	GPGGVWAAEAISDAR	sp|P0C0L5|CO4B_HUMAN	VFALDQK
sp|P02790|HEMO_HUMAN	GGYTLVSGYPK	sp|P01011|AACT_HUMAN	AKWEMPFDPQDTHQSR	sp|Q14624|ITIH4_HUMAN	NPLVWVHASPEHVVVTR
sp|P02649|APOE_HUMAN	LAVYQAGAR	sp|P01860|IGHG3_HUMAN	VVSVLTVLHQDWLNGK	sp|Q06033|ITIH3_HUMAN	ESPGNVQIVNGYFVHFFAPQGLPVVPK
sp|P0C0L5|CO4B_HUMAN	EGAIHR	sp|P00738|HPT_HUMAN	HYEGSTVPEK	sp|P02647|APOA1_HUMAN	VKDLATVYVDVLK
sp|P01009|A1AT_HUMAN	FLENEDRR	sp|P00450|CERU_HUMAN	VYPGEQYTYMLLATEEQSPGEGDGNCVTR	sp|O15162|PLS1_HUMAN	IIDNMGQEVITLERPLR
sp|P04114|APOB_HUMAN	VNWEEEAASGLLTSLK	sp|P27169|PON1_HUMAN	GIETGSEDLEILPNGLAFISSGLK	sp|P02787|TRFE_HUMAN	CDEWSVNSVGK
sp|P00450|CERU_HUMAN	VYVHLK	sp|P0C0L5|CO4B_HUMAN	LLATLCSAEVCQCAEGK	sp|P01024|CO3_HUMAN	VPVAVQGEDTVQSLTQGDGVAK
sp|P02787|TRFE_HUMAN	FDEFFSEGCAPGSK	sp|P02649|APOE_HUMAN	FWDYLR	sp|A0A0J9YVY3|HV741_HUMAN	AEDTAVYYCAR
sp|P02787|TRFE_HUMAN	KPVEEYANCHLAR	sp|P00738|HPT_HUMAN	TIAEN	sp|P0DOX6|IGM_HUMAN	VSVFVPPR
sp|P01871|IGHM_HUMAN	YFAHSILTVSEEEWNTGETYTCVVAHEALPNR	sp|P08603|CFAH_HUMAN	ECDTDGWTNDIPICEVVK	sp|Q06033|ITIH3_HUMAN	GMTNINDGLLR
sp|P01008|ANT3_HUMAN	LPGIVAEGR	sp|P13671|CO6_HUMAN	ENPAVIDFELAPIVDLVR	sp|P0DOX7|IGK_HUMAN	DSTYSLSSTLTLSK
sp|P00450|CERU_HUMAN	RQSEDSTFYLGER	sp|P08603|CFAH_HUMAN	EYHFGQAVR	sp|P01023|A2MG_HUMAN	GHFSISIPVK
sp|P01008|ANT3_HUMAN	GDDITMVLILPKPEK	sp|P0DJI9|SAA2_HUMAN	RGPGGAWAAEVISNAR	sp|P19827|ITIH1_HUMAN	VTYDVSR
sp|P01871|IGHM_HUMAN	GQPLSPEK	sp|P00734|THRB_HUMAN	TFGSGEADCGLRPLFEK	sp|P01780|HV307_HUMAN	AEDTAVYYCAR
sp|P43652|AFAM_HUMAN	FTDSENVCQER	sp|P01023|A2MG_HUMAN	GVPIPNK	sp|P0DOX7|IGK_HUMAN	DIQMTQSPSTLSASVGDR
sp|P02787|TRFE_HUMAN	DSGFQMNQLR	sp|P01859|IGHG2_HUMAN	EPQVYTLPPSREEMTK	sp|P02787|TRFE_HUMAN	SCHTAVGR
sp|P00734|THRB_HUMAN	LAACLEGNCAEGLGTNYR	sp|P0C0L4|CO4A_HUMAN	GSVFLR	sp|O95445|APOM_HUMAN	NQEACELSNN
sp|P01709|LV208_HUMAN	RPSGVPDR	sp|A0A075B6P5|KV228_HUMAN	FSGSGSGTDFTLK	sp|P04114|APOB_HUMAN	YGMVAQVTQTLK
sp|P02748|CO9_HUMAN	GTVIDVTDFVNWASSINDAPVLISQK	sp|P0DOX2|IGA2_HUMAN	VPPPPPCCHPR	sp|P01023|A2MG_HUMAN	SDIAPVAR
sp|P08697|A2AP_HUMAN	WFLLEQPEIQVAHFPFK	sp|P0C0L4|CO4A_HUMAN	VFALDQK	sp|P04196|HRG_HUMAN	ADLFYDVEALDLESPK
sp|P04114|APOB_HUMAN	NLQNNAEWVYQGAIR	sp|A0A0C4DH25|KVD20_H	LLIYDASSRATGIPDR	sp|P02750|A2GL_HUMAN	VAAGAFQGLR

sp|P02768|ALBU_HUMAN	SEVAHR	sp|P01008|ANT3_HUMAN	DDLYVSDAFHK	sp|A0A0A0MRZ8|KVD11_HUMAN	LLIYDASNR
sp|Q00975|CAC1B_HUMAN	AESGEPGAR	sp|P02790|HEMO_HUMAN	VDGALCMEK	sp|P01772|HV333_HUMAN	AEDTAVYYCAR
sp|P0C0L5|CO4B_HUMAN	EELVYELNPLDHR	sp|P02749|APOH_HUMAN	FICPLTGLWPINTLK	sp|P0C0L4|CO4A_HUMAN	NFLVR
sp|P00738|HPT_HUMAN	SCAVAEYGVYVK	sp|P0C0L5|CO4B_HUMAN	DKGQAGLQR	sp|P02765|FETUA_HUMAN	FSVVYAK
sp|P0C0L5|CO4B_HUMAN	AVGSGATFSHYYYMILSR	sp|P02768|ALBU_HUMAN	LKECCEKPLLEK	sp|P02766|TTHY_HUMAN	VEIDTK
sp|Q14624|ITIH4_HUMAN	QLGLPGPPDVPDHAAYHPFR	sp|P02743|SAMP_HUMAN	GYVIIKPLVWV	sp|P04004|VTNC_HUMAN	TYLFK
sp|P02775|CXCL7_HUMAN	KICLDPDAPR	sp|Q14624|ITIH4_HUMAN	LPEGSVSLIILLTDGDPTVGETNPR	sp|P00450|CERU_HUMAN	SGAGTEDSACIPWAYYSTVDQVK
sp|P02649|APOE_HUMAN	DADDLQK	sp|P02765|FETUA_HUMAN	TVVQPSVGAAAGPVVPPCPGR	sp|P02751|FINC_HUMAN	DSMIWDCTCIGAGR
sp|P05156|CFAI_HUMAN	TMGYQDFADVVCYTQK	sp|A0M8Q6|IGLC7_HUMAN	ADGSPVK	sp|P35542|SAA4_HUMAN	EALQGVGDMGR
sp|P04217|A1BG_HUMAN	GVTFLLR	sp|P02671|FIBA_HUMAN	TVIGPDGHK	sp|P08603|CFAH_HUMAN	AGEQVTYTCATYYK
sp|P19652|A1AG2_HUMAN	EYQTR	sp|P0C0L4|CO4A_HUMAN	GSFEFPVGDAVSK	sp|P02768|ALBU_HUMAN	KLVAASQAALGL
sp|P01009|A1AT_HUMAN	LYHSEAFTVNFGDTEEAK	sp|P01871|IGHM_HUMAN	ESATITCLVTGFSPADVFVQWMQR	sp|P01024|CO3_HUMAN	SGIPIVTSPYQIHFTK
sp|P02647|APOA1_HUMAN	VQPYLDDFQK	sp|P04114|APOB_HUMAN	GVISIPR	sp|P01834|IGKC_HUMAN	RTVAAPSVFIFPPSDEQLK
sp|O43866|CD5L_HUMAN	IWLDNVR	sp|Q14624|ITIH4_HUMAN	NVVFVIDK	sp|P01009|A1AT_HUMAN	FLENEDR
sp|P02042|HBD_HUMAN	VHLTPEEK	sp|P02649|APOE_HUMAN	ALMDETMK	sp|P01009|A1AT_HUMAN	WERPFEVK
sp|P01024|CO3_HUMAN	VLLDGVQNPR	sp|A0A0B4J1Y9|HV372_HUMAN	FTISR	sp|P04114|APOB_HUMAN	TSSFALNLPTLPEVK
sp|P0DOX8|IGL1_HUMAN	VTVLGQPK	sp|P01009|A1AT_HUMAN	TLNQPDSQLQLTTGNGLFLSEGLK	sp|P00747|PLMN_HUMAN	NPDNDPQGPWCYTTDPEKR
sp|P02771|FETA_HUMAN	NIFLASFVHEYSR	sp|P08603|CFAH_HUMAN	SITCIHGVWTQLPQCVAIDK	sp|P02751|FINC_HUMAN	NTFAEVTGLSPGVTYYFK
sp|P01009|A1AT_HUMAN	LYHSEAFTVNFGDTEEAKK	sp|P01024|CO3_HUMAN	ISLPESLK	sp|P01023|A2MG_HUMAN	EEFPFALGVQTLPQTCDEPK
sp|P00739|HPTR_HUMAN	TIAEN	sp|P02790|HEMO_HUMAN	VWVYPPEK	sp|P0C0L5|CO4B_HUMAN	KYVLPNFEVK
sp|P04114|APOB_HUMAN	QTIIVVLENVQR	sp|P0C0L4|CO4A_HUMAN	ALEILQEEDLIDEDDIPVR	sp|P01876|IGHA1_HUMAN	SGNTFRPEVHLLPPPSEEALALNELVTLTCLAR
sp|P04114|APOB_HUMAN	EFNLQNMGLPDFHIPENLFLK	sp|P06727|APOA4_HUMAN	SLAELGGHLDQQVEEFRR	sp|P0DOX2|IGA2_HUMAN	SGNTFRPEVHLLPPPSEEALALNELVTLTCLAR

sp|P01860|IGHG3_HUMAN	TPLGDTTHTCPR	sp|P01024|CO3_HUMAN	QGALELIK	sp|P02768|ALBU_HUMAN	ADDKETCFAEEGK
sp|P02647|APOA1_HUMAN	WQEEMELYR	sp|P02787|TRFE_HUMAN	SMGGKEDLIWELLNQAQEHFGK	sp|P01024|CO3_HUMAN	SGSDEVQVGQQR
sp|P04114|APOB_HUMAN	VQGVEFSHR	sp|P04114|APOB_HUMAN	GNVATEISTER	sp|P02649|APOE_HUMAN	AQAWGER
sp|P00748|FA12_HUMAN	LHEAFSPVSYQHDLALLR	sp|P0DOX6|IGM_HUMAN	VFAIPPSFASIFLTK	sp|P04217|A1BG_HUMAN	DAVLR
sp|P01019|ANGT_HUMAN	ADSQAQLLLSTVVGVFTAPGLHLK	sp|P05546|HEP2_HUMAN	GGETAQSADPQWEQLNNK	sp|P01011|AACT_HUMAN	LINDYVK
sp|P0DOX7|IGK_HUMAN	SGTASVVCLLNNFYPR	sp|P02749|APOH_HUMAN	ATFGCHDGYSLDGPEEIECTK	sp|P01591|IGJ_HUMAN	IVLVDNK
sp|P01619|KV320_HUMAN	LLIYGASSR	sp|P19823|ITIH2_HUMAN	IYGNQDTSSQLK	sp|P68871|HBB_HUMAN	LLGNVLVCVLAHHFGK
sp|P04003|C4BPA_HUMAN	LSLEIEQLELQR	sp|P01024|CO3_HUMAN	FISLGEACK	sp|P02790|HEMO_HUMAN	LDTSR
sp|P01024|CO3_HUMAN	SSLSVPYVIVPLK	sp|P0C0L5|CO4B_HUMAN	YVSHFETEGPHVLLYFDSVPTSR	sp|P02649|APOE_HUMAN	QQTEWQSGQR
sp|P10909|CLUS_HUMAN	TLLSNLEEAK	sp|P02751|FINC_HUMAN	VFAVSHGR	sp|P02652|APOA2_HUMAN	EPCVESLVSQYFQTVTDYGK
sp|P02656|APOC3_HUMAN	DALSSVQESQVAQQAR	sp|P02647|APOA1_HUMAN	LREQLGPVTQEFWDNLEK	sp|P01599|KV117_HUMAN	LIYAASSLQSGVPSR
sp|P01871|IGHM_HUMAN	YVTSAPMPEPQAPGR	sp|Q14624|ITIH4_HUMAN	FSSHVGGTLGQFYQEVLWGSPAASDDGR	sp|P02753|RET4_HUMAN	LIVHNGYCDGR
sp|P01859|IGHG2_HUMAN	NQVSLTCLVK	sp|P05090|APOD_HUMAN	NILTSNNIDVK	sp|P06727|APOA4_HUMAN	GNTEGLQK
sp|O75636|FCN3_HUMAN	ELLSQGATLSGWYHLCLPEGR	sp|P02753|RET4_HUMAN	GNDDHWIVDTDYDTYAVQYSCR	sp|P01023|A2MG_HUMAN	VSNQTLSLFFTVLQDVPVR
sp|P0DOX6|IGM_HUMAN	ESATITCLVTGFSPADVFVQWMQR	sp|P19827|ITIH1_HUMAN	GFSLDEATNLNGGLLR	sp|P04114|APOB_HUMAN	EVYGFNPEGK
sp|P02790|HEMO_HUMAN	EVGTPHGIILDSVDAAFICPGSSR	sp|P0DOX5|IGG1_HUMAN	VVSVLTVLHQDWLNGK	sp|P01008|ANT3_HUMAN	IPEATNR
sp|P08603|CFAH_HUMAN	IVSSAMEPDREYHFGQAVR	sp|P01876|IGHA1_HUMAN	SAVQGPPER	sp|P08185|CBG_HUMAN	NIFISPVSISMALAMLSLGTCGHTR
sp|P02771|FETA_HUMAN	APQLTSSELMAITR	sp|P01860|IGHG3_HUMAN	TTPPMLDSDGSFFLYSK	sp|P08603|CFAH_HUMAN	NDFTWFK
sp|P0C0L5|CO4B_HUMAN	NPSDPMPQAPALWIETTAYALLHLLLHEGK	sp|P02656|APOC3_HUMAN	DKFSEFWDLDPEVRPTSAVAA	sp|P01860|IGHG3_HUMAN	CPAPELLGGPSVFLFPPKPK
sp|P08603|CFAH_HUMAN	LSYTCEGGFR	sp|P25311|ZA2G_HUMAN	HVEDVPAFQALGSLNDLQFFR	sp|P04114|APOB_HUMAN	DKDQEVLLQTFLDDASPGDKR
sp|P01024|CO3_HUMAN	AAVYHHFISDGVR	sp|P01871|IGHM_HUMAN	ESGPTTYK	sp|P04114|APOB_HUMAN	NNALDFVTK
sp|P02649|APOE_HUMAN	GEVQAMLGQSTEELR	sp|P02787|TRFE_HUMAN	SAGWNIPIGLLYCDLPEPR	sp|P06396|GELS_HUMAN	AQPVQVAEGSEPDGFWEALGGK
sp|P06396|GELS_HUMAN	EPGLQIWR	sp|P02748|CO9_HUMAN	GEIHLGR	sp|P00747|PLMN_HUMAN	NPDADKGPWCFTTDPSVR

Protein	Peptide	Protein	Peptide	Protein	Peptide
sp|P0C0L4|CO4A_HUMAN	AEFQDALEK	sp|P0C0L5|CO4B_HUMAN	VQQPDCR	sp|P01023|A2MG_HUMAN	AYIFIDEAHITQALIWLSQR
sp|P02649|APOE_HUMAN	SELEEQLTPVAEETR	sp|P06396|GELS_HUMAN	AVEVLPK	sp|P10643|CO7_HUMAN	LIDQYGTHYLQSGSLGGEYR
sp|P04004|VTNC_HUMAN	GQYCYELDEK	sp|P01876|IGHA1_HUMAN	YLTWASR	sp|P01877|IGHA2_HUMAN	WLQGSQELPR
sp|P07357|CO8A_HUMAN	YNPVVIDFEMQPIHEVLR	sp|P35858|ALS_HUMAN	DLHFLEELQLGHNR	sp|P06396|GELS_HUMAN	GASQAGAPQGR
sp|P01042|KNG1_HUMAN	LGQSLDCNAEVYVVPWEK	sp|P00450|CERU_HUMAN	VNKDDEEFIESNK	sp|P01876|IGHA1_HUMAN	VAAEDWK
sp|P02766|TTHY_HUMAN	AADDTWEPFASGK	sp|A0A0J9YXX1|HV5X1_HUMAN	GLEWMGR	sp|P00738|HPT_HUMAN	VTSIQDWVQK
sp|P01023|A2MG_HUMAN	NALFCLESAWK	sp|P01024|CO3_HUMAN	NEQVEIR	sp|P04217|A1BG_HUMAN	ELLVPR
sp|P00739|HPTR_HUMAN	SCAVAEYGVYVK	sp|Q66K66|TM198_HUMAN	MPGTVATLR	sp|Q08380|LG3BP_HUMAN	GQWGTVCDNLWDLTDASVVCR
sp|Q14624|ITIH4_HUMAN	RLDYQEGPPGVEISCWSVEL	sp|P01023|A2MG_HUMAN	LPPNVVEESAR	sp|P04114|APOB_HUMAN	QIDDIDVR
sp|P00450|CERU_HUMAN	QYTDSTFR	sp|P02771|FETA_HUMAN	LTTLER	sp|P0DOX2|IGA2_HUMAN	WLQGSQELPR
sp|P0C0L4|CO4A_HUMAN	VLSLAQEQVGGSPEK	sp|P01024|CO3_HUMAN	TELRPGETLNVNFLLR	sp|Q14624|ITIH4_HUMAN	LGVYELLLK
sp|P04114|APOB_HUMAN	EQHLFLPFSYK	sp|P01024|CO3_HUMAN	VFSLAVNLIAIDSQVLCGAVK	sp|P01024|CO3_HUMAN	SEFPESWLWNVEDLKEPPK
sp|P04196|HRG_HUMAN	DGYLFQLLR	sp|P00751|CFAB_HUMAN	EKLQDEDLGFL	sp|P01023|A2MG_HUMAN	AGAFCLSEDAGLGISSTASLR
sp|P02751|FINC_HUMAN	ATITGYR	sp|P10643|CO7_HUMAN	DGFVQDEGTMFPVGK	sp|P0C0L4|CO4A_HUMAN	DFALLSLQVPLKDAK
sp|P01876|IGHA1_HUMAN	WLQGSQELPR	sp|P02652|APOA2_HUMAN	EQLTPLIK	sp|P02654|APOC1_HUMAN	EFGNTLEDK
sp|P02787|TRFE_HUMAN	AVGNLR	sp|P00734|THRB_HUMAN	SGIECQLWR	sp|P00736|C1R_HUMAN	IAHDLR
sp|P10909|CLUS_HUMAN	ELDESLQVAER	sp|P04114|APOB_HUMAN	IDDIWNLEVK	sp|P06727|APOA4_HUMAN	LAPLAEDVR
sp|P02787|TRFE_HUMAN	DLLFK	sp|P00734|THRB_HUMAN	GQQYQGR	sp|P01023|A2MG_HUMAN	TEHPFTVEEFVLPK
sp|P02647|APOA1_HUMAN	DLEEVK	sp|P02748|CO9_HUMAN	AEQCCEETASSISLHGK	sp|P02751|FINC_HUMAN	GNLLQCICTGNGR
sp|A0A0C4DH25|KVD20_HUMAN	FSGSGSGTDFTLTISR	sp|P0C0L4|CO4A_HUMAN	HLVPGAPFLLQALVR	sp|P02771|FETA_HUMAN	YGHSDCCSQSEEGR
sp|P08697|A2AP_HUMAN	HQMDLVATLSQLGLQELFQAPDLR	sp|P02649|APOE_HUMAN	EQVAEVR	sp|P00734|THRB_HUMAN	IYIHPR
sp|P01023|A2MG_HUMAN	ATVLNYLPK	sp|P01024|CO3_HUMAN	LESEETMVLEAHDAQGDVPVTVTVHDFPGK	sp|P0C0L4|CO4A_HUMAN	EGAIHR

sp|P02763|A1AG1_HUMAN	TYMLAFDVNDEK	sp|P10643|CO7_HUMAN	NVVYTCNEGYSLIGNPVAR	sp|P05155|IC1_HUMAN	GVTSVSQIFHSPDLAIR
sp|P02751|FINC_HUMAN	ITYGETGGNSPVQEFTVPGSK	sp|P02749|APOH_HUMAN	ATVVYQGER	sp|P02647|APOA1_HUMAN	ETEGLR
sp|P01023|A2MG_HUMAN	SASNMAIVDVK	sp|P01023|A2MG_HUMAN	GPTQEFK	sp|P01742|HV169_HUMAN	SEDTAVYYCAR
sp|P01834|IGKC_HUMAN	VDNALQSGNSQESVTEQDSKDS TYSLSSTLTLSK	sp|P00450|CERU_HUMAN	VDKDNEDFQESNR	sp|A0A0J9YXX1|HV5X1_HUMAN	ASDTAMYYCAR
sp|P05155|IC1_HUMAN	DFTCVHQALK	sp|P00747|PLMN_HUMAN	NLDENYCR	sp|P01042|KNG1_HUMAN	QVVAGLNFR
sp|P05546|HEP2_HUMAN	FTVDRPFLFLIYEHR	sp|P0C0L5|CO4B_HUMAN	LHLETDSLALVALGALDTALYAAGS K	sp|P0C0L4|CO4A_HUMAN	ECVGFEAVQEVPVGLVQPASATL YDYYNPER
sp|P02760|AMBP_HUMAN	VVAQGVGIPEDSIFTMADR	sp|P05155|IC1_HUMAN	LEDMEQALSPSVFK	sp|P00751|CFAB_HUMAN	DLLYIGK
sp|P02768|ALBU_HUMAN	LCTVATLR	sp|P00738|HPT_HUMAN	QLVEIEK	sp|P06727|APOA4_HUMAN	IDQTVEELRR
sp|P01860|IGHG3_HUMAN	EPQVYTLPPSR	sp|P02768|ALBU_HUMAN	VFDEFKPLVEEPQNLIK	sp|P01009|A1AT_HUMAN	AVLTIDEK
sp|P01024|CO3_HUMAN	AVLYNYR	sp|P01024|CO3_HUMAN	ILLQGTPVAQMTEDAVDAER	sp|P01008|ANT3_HUMAN	IEDGFSLK
sp|P02766|TTHY_HUMAN	ALGISPFHEHAEVVFTANDSGPR	sp|P00734|THRB_HUMAN	SPQELLCGASLISDR	sp|P06727|APOA4_HUMAN	LGEVNTYAGDLQK
sp|P0C0L5|CO4B_HUMAN	ECVGFEAVQEVPVGLVQPASAT LYDYYNPER	sp|P00751|CFAB_HUMAN	DFHINLFQVLPWLK	sp|P02787|TRFE_HUMAN	IMNGEADAMSLDGGFVYIAGK
sp|P04114|APOB_HUMAN	VLVDHFGYTK	sp|P04217|A1BG_HUMAN	TPGAAANLELIFVGPQHAGNYR	sp|P01602|KV105_HUMAN	DIQMTQSPSTLSASVGDR
sp|P02655|APOC2_HUMAN	ESLSSYWESAK	sp|P02753|RET4_HUMAN	QEELCLAR	sp|P06310|KV230_HUMAN	FSGSGSGTDFTLK
sp|P02743|SAMP_HUMAN	DNELLVYK	sp|P02768|ALBU_HUMAN	LVRPEVDVMCTAFHDNEETFLKK	sp|P0C0L4|CO4A_HUMAN	VDFTLSSER
sp|P36955|PEDF_HUMAN	LTQVEHR	sp|P01009|A1AT_HUMAN	KLSSWVLLMK	sp|P00450|CERU_HUMAN	QSEDSTFYLGER
sp|P02760|AMBP_HUMAN	ETLLQDFR	sp|P02771|FETA_HUMAN	ESSLLNQHACAVMK	sp|P00738|HPT_HUMAN	ILGGHLDAK
sp|P02647|APOA1_HUMAN	LLDNWDSVTSTFSK	sp|P02774|VTDB_HUMAN	VCSQYAAYGEK	sp|P02765|FETUA_HUMAN	VVHAAK
sp|P02768|ALBU_HUMAN	QEPERNECFLQHK	sp|P00738|HPT_HUMAN	VGYVSGWGR	sp|P00738|HPT_HUMAN	VMPICLPSKDYAEVGR
sp|P02787|TRFE_HUMAN	SASDLTWDNLK	sp|P04217|A1BG_HUMAN	SLPAPWLSMAPVSWITPGLK	sp|P0DJI8|SAA1_HUMAN	GNYDAAK
sp|P01031|CO5_HUMAN	ELSYYSLEDLNNK	sp|P01024|CO3_HUMAN	QLANGVDR	sp|P31513|FMO3_HUMAN	GVFPPLLEK
sp|P02768|ALBU_HUMAN	ETYGEMADCCAK	sp|P02768|ALBU_HUMAN	QEPERNECFLQHKDDNPNLPR	sp|P04003|C4BPA_HUMA	FSAICQGDGTWSPR

sp|P02746|C1QB_HUMAN	LEQGENVFLQATDK	sp|P01782|HV309_HUMAN	AEDTALYYCAK	sp|P00450|CERU_HUMAN	DIFTGLIGPMK
sp|Q96PD5|PGRP2_HUMAN	GSQTQSHPDLGTEGCWDQLSAPR	sp|P02790|HEMO_HUMAN	LWWLDLK	sp|P02768|ALBU_HUMAN	QEPER
sp|P01024|CO3_HUMAN	LLPVGR	sp|O43866|CD5L_HUMAN	ELGCGAASGTPSGILYEPPAEK	sp|P01591|IGJ_HUMAN	MVETALTPDACYPD
sp|P19652|A1AG2_HUMAN	EHVAHLLFLR	sp|P0DOX2|IGA2_HUMAN	EVQLVETGGGLIQPGGSLR	sp|P19823|ITIH2_HUMAN	HADPDFTR
sp|P02787|TRFE_HUMAN	QQQHLFGSNVTDCSGNFCLFR	sp|P02042|HBD_HUMAN	VLGAFSDGLAHLDNLK	sp|P01023|A2MG_HUMAN	QQNAQGGFSSTQDTVVALHALSK
sp|P04114|APOB_HUMAN	HINIDQFVR	sp|P01009|A1AT_HUMAN	LSSWVLLMK	sp|Q14624|ITIH4_HUMAN	FAHTVVTSR
sp|P01024|CO3_HUMAN	WLNEQR	sp|A0A075B6K4|LV310_HUMAN	RPSGIPER	sp|P0DOX8|IGL1_HUMAN	ADGSPVK
sp|P0CF74|IGLC6_HUMAN	SYSCQVTHEGSTVEK	sp|P0DOX8|IGL1_HUMAN	SYSCQVTHEGSTVEK	sp|P27169|PON1_HUMAN	ALYCEL
sp|P10643|CO7_HUMAN	AASGTQNNVLR	sp|P02787|TRFE_HUMAN	KPVDEYK	sp|P0DOX2|IGA2_HUMAN	YLTWASR
sp|P01023|A2MG_HUMAN	TAQEGDHGSHVYTK	sp|P25311|ZA2G_HUMAN	AYLEEECPATLR	sp|P08603|CFAH_HUMAN	EIMENYNIALR
sp|P01024|CO3_HUMAN	QKPDGVFQEDAPVIHQEMIGGLR	sp|P01860|IGHG3_HUMAN	NQVSLTCLVK	sp|P06396|GELS_HUMAN	EGGQTAPASTR
sp|P07951|TPM2_HUMAN	IVTNNLK	sp|P19827|ITIH1_HUMAN	ILGDMQPGDYFDLVLFGTR	sp|P0C0L4|CO4A_HUMAN	LTSLSDR
sp|P10909|CLUS_HUMAN	SGSGLVGR	sp|P01860|IGHG3_HUMAN	DTLMISR	sp|P02768|ALBU_HUMAN	RMPCAEDYLSVVLNQLCVLHEK
sp|P01023|A2MG_HUMAN	AFQPFFVELTMPYSVIR	sp|P02768|ALBU_HUMAN	NECFLQHK	sp|P02671|FIBA_HUMAN	HPDEAAFFDTASTGK
sp|P00747|PLMN_HUMAN	ATTVTGTPCQDWAAQEPHR	sp|P01009|A1AT_HUMAN	VVNPTQK	sp|P04217|A1BG_HUMAN	IFFHLNAVALGDGGHYTCR
sp|Q86T65|DAAM2_HUMAN	FLYEMSR	sp|P02774|VTDB_HUMAN	VPTADLEDVLPLAEDITNILSK	sp|P04114|APOB_HUMAN	HSITNPLAVLCEFISQSIK
sp|P01023|A2MG_HUMAN	DTVIKPLLVEPEGLEK	sp|P0C0L4|CO4A_HUMAN	DFALLSLQVPLK	sp|P00736|C1R_HUMAN	TLDEFTIIQNLQPQYQFR
sp|P02042|HBD_HUMAN	VVAGVANALAHK	sp|P02743|SAMP_HUMAN	AYSDLSR	sp|P01619|KV320_HUMAN	ATLSCR
sp|A0A0A0MRZ8|KVD11_HUMAN	ATLSCR	sp|P02768|ALBU_HUMAN	NECFLQHKDDNPNLPR	sp|P02787|TRFE_HUMAN	NPDPWAK
sp|P36955|PEDF_HUMAN	DTDTGALLFIGK	sp|A0A0C4DH67|KV108_HUMAN	VTITCR	sp|P0DOX2|IGA2_HUMAN	FTISR
sp|P00734|THRB_HUMAN	KPVAFSDYIHPVCLPDR	sp|P02787|TRFE_HUMAN	DKEACVHK	sp|P0C0L4|CO4A_HUMAN	ANSFLGEK
sp|P00739|HPTR_HUMAN	SDLGAVISLLLWGR	sp|P01011|AACT_HUMAN	MEEVEAMLLPETLK	sp|P02763|A1AG1_HUMAN	DKCEPLEK

Protein	Peptide	Protein	Peptide	Protein	Peptide
sp|P01861|IGHG4_HUMAN	LTVDK	sp|P0C0L4|CO4A_HUMAN	VVEEQESR	sp|P04114|APOB_HUMAN	AQNLYQELLTQEGQASFQGLK
sp|P0C0L4|CO4A_HUMAN	STQDTVIALDALSAYWIASHTTEER	sp|P04430|KV116_HUMAN	VTITCR	sp|P08603|CFAH_HUMAN	SLGNVIMVCR
sp|P0C0L4|CO4A_HUMAN	VGDTLNLNLR	sp|P19827|ITIH1_HUMAN	LWAYLTIQELLAK	sp|P01876|IGHA1_HUMAN	NFPPSQDASGDLYTTSSQLTLPATQCLAGK
sp|P0C0L5|CO4B_HUMAN	VHYTVCIWR	sp|P01008|ANT3_HUMAN	VAEGTQVLELPFK	sp|P02774|VTDB_HUMAN	DVCDPGNTK
sp|P01860|IGHG3_HUMAN	GPSVFPLAPCSR	sp|P0C0L5|CO4B_HUMAN	TYNVLDMK	sp|P02774|VTDB_HUMAN	EFSHLGK
sp|P19823|ITIH2_HUMAN	AEDHFSVIDFNQNIR	sp|P00734|THRB_HUMAN	ENLDR	sp|Q14624|ITIH4_HUMAN	LALDNGGLAR
sp|P01024|CO3_HUMAN	APSTWLTAYVVK	sp|P02741|CRP_HUMAN	AFVFPK	sp|P00450|CERU_HUMAN	IDTINLFPATLFDAYMVAQNPGEWMLSCQNLNHLK
sp|P01024|CO3_HUMAN	SVQLTEK	sp|P0DOX5|IGG1_HUMAN	NQVSLTCLVK	sp|P01877|IGHA2_HUMAN	DVLVR
sp|P00734|THRB_HUMAN	ELLESYIDGR	sp|P04114|APOB_HUMAN	LLLMGAR	sp|P00450|CERU_HUMAN	EYTDASFTNR
sp|O00159|MYO1C_HUMAN	GFVLR	sp|P02787|TRFE_HUMAN	LCMGSGLNLCEPNNK	sp|P02790|HEMO_HUMAN	DGWHSWPIAHQWPQGPSAVDAAFSWEEK
sp|P01780|HV307_HUMAN	FTISR	sp|P02750|A2GL_HUMAN	DLLLPQPDLR	sp|P00739|HPTR_HUMAN	LPECEAVCGKPK
sp|P00739|HPTR_HUMAN	KQLVEIEK	sp|P05155|IC1_HUMAN	FQPTLLTLPR	sp|P04114|APOB_HUMAN	NIILPVYDK
sp|P01024|CO3_HUMAN	TVMVNIENPEGIPVK	sp|P02763|A1AG1_HUMAN	SDVVYTDWK	sp|P0C0L4|CO4A_HUMAN	VQQPDCR
sp|P04004|VTNC_HUMAN	DVWGIEGPIDAAFTR	sp|P02649|APOE_HUMAN	ELQAAQAR	sp|O14791|APOL1_HUMAN	VNEPSILEMSR
sp|P02787|TRFE_HUMAN	ADRDQYELLCLDNTR	sp|P02649|APOE_HUMAN	VQAAVGTSAAPVPSDNH	sp|P18428|LBP_HUMAN	GLQYAAQEGLLALQSELLR
sp|P04114|APOB_HUMAN	ITLPDFR	sp|P02656|APOC3_HUMAN	GWVTDGFSSLK	sp|P02748|CO9_HUMAN	AIEDYINEFSVR
sp|P00450|CERU_HUMAN	GAYPLSIEPIGVR	sp|P02760|AMBP_HUMAN	EYCGVPGDGDEELLR	sp|P01009|A1AT_HUMAN	IVDLVK
sp|P0DOX8|IGL1_HUMAN	RPSGVPDR	sp|P01031|CO5_HUMAN	EGMLSIMSYR	sp|P05090|APOD_HUMAN	WYEIEK
sp|P0C0L4|CO4A_HUMAN	GLESQTK	sp|P02768|ALBU_HUMAN	TYETTLEK	sp|P00751|CFAB_HUMAN	GDSGGPLIVHK
sp|P02768|ALBU_HUMAN	SLHTLFGDK	sp|P0C0L5|CO4B_HUMAN	SCGLHQLLR	sp|P04217|A1BG_HUMAN	SWVPHTFESELSDPVELLVAES
sp|P02765|FETUA_HUMAN	AHYDLR	sp|P00739|HPTR_HUMAN	GSFPWQAK	sp|P02774|VTDB_HUMAN	ELPEHTVK
sp|P02787|TRFE_HUMAN	CSTSSLLEACTFR	sp|O43866|CD5L_HUMAN	NTCNHDEDTWVECEDPFDLR	sp|P01009|A1AT_HUMAN	ELDRDTVFALVNYIFFK
sp|P02774|VTDB_HUMAN	VLEPTLK	sp|P01591|IGJ_HUMAN	SSEDPNEDIVER	sp|P01877|IGHA2_HUMAN	DLCGCYSVSSVLPGCAQPWNHGETFTCTAAHPELK

sp|P08603|CFAH_HUMAN	SPDVINGSPISQK	sp|A0A0B4J1X5|HV374_HUMAN	AEDTAVYYCAR	sp|P02768|ALBU_HUMAN	ECCEKPLLEK
sp|P04217|A1BG_HUMAN	HQFLLTGDTQGR	sp|P0C0L4|CO4A_HUMAN	LQETSNWLLSQQQADGSFQDPCPVLDR	sp|P01023|A2MG_HUMAN	YSDASDCHGEDSQAFCEK
sp|P02768|ALBU_HUMAN	TPVSDR	sp|P02787|TRFE_HUMAN	KASYLDCIR	sp|Q9H1C0|LPAR5_HUMAN	LVAASVPARDR
sp|P00738|HPT_HUMAN	KQLVEIEK	sp|P02746|C1QB_HUMAN	TINVPLR	sp|P02649|APOE_HUMAN	LQAEAFQAR
sp|P02765|FETUA_HUMAN	EATEAAK	sp|P02647|APOA1_HUMAN	DSGRDYVSQFEGSALGK	sp|P0C0L4|CO4A_HUMAN	VHYTVCIWR
sp|P02787|TRFE_HUMAN	WCALSHHER	sp|P04004|VTNC_HUMAN	RVDTVDPPYPR	sp|P02750|A2GL_HUMAN	GPLQLER
sp|P01877|IGHA2_HUMAN	SGNTFRPEVHLLPPPSEELALNELVTLTCLAR	sp|P01011|AACT_HUMAN	FTEDAK	sp|A0A075B6S2|KVD29_HUMAN	FSGSGSGTDFTLK
sp|P02787|TRFE_HUMAN	DYELLCLDGTR	sp|P00738|HPT_HUMAN	SPVGVQPILNEHTFCAGMSK	sp|P01042|KNG1_HUMAN	DFVQPPTK
sp|Q96PD5|PGRP2_HUMAN	AGLLRPDYALLGHR	sp|P01024|CO3_HUMAN	DTWVEHWPEEDECQDEENQK	sp|P0C0L4|CO4A_HUMAN	KYVLPNFEVK
sp|P08603|CFAH_HUMAN	DGWSAQPTCIK	sp|P01780|HV307_HUMAN	GLEWVANIK	sp|P02751|FINC_HUMAN	VTIMWTPPESAVTGYR
sp|P06727|APOA4_HUMAN	RVEPYGENFNK	sp|P04114|APOB_HUMAN	GFEPTLEALFGK	sp|P0DOY2|IGLC2_HUMAN	ATLVCLISDFYPGAVTVAWK
sp|P07360|CO8G_HUMAN	YGFCEAADQFHVLDEVR	sp|P02751|FINC_HUMAN	SYTITGLQPGTDYK	sp|P04196|HRG_HUMAN	DSPVLIDFFEDTER
sp|P02775|CXCL7_HUMAN	GTHCNQVEVIATLK	sp|P02768|ALBU_HUMAN	KQTALVELVK	sp|P02751|FINC_HUMAN	DLQFVEVTDVK
sp|A0A075B6S2|KVD29_HUMAN	FSGVPDR	sp|P01871|IGHM_HUMAN	VFAIPPSFASIFLTK	sp|P0C0L5|CO4B_HUMAN	GLESQTK
sp|P02751|FINC_HUMAN	ESKPLTAQQTTK	sp|P02768|ALBU_HUMAN	KVPQVSTPTLVEVSR	sp|P01782|HV309_HUMAN	LSCAASGFTFDDYAMHWVR
sp|P01024|CO3_HUMAN	GQGTLSVVTMYHAK	sp|P01011|AACT_HUMAN	WEMPFDPQDTHQSR	sp|P01859|IGHG2_HUMAN	LTVDK
sp|P01023|A2MG_HUMAN	HYDGSYSTFGER	sp|P06312|KV401_HUMAN	ATINCK	sp|P01023|A2MG_HUMAN	VSVQLEASPAFLAVPVEK
sp|P06312|KV401_HUMAN	LLIYWASTR	sp|Q14624|ITIH4_HUMAN	FSSHVGGTLGQFYQEVLWGSPAASDDGRR	sp|P0C0L5|CO4B_HUMAN	VETVDR
sp|P04196|HRG_HUMAN	QIGSVYR	sp|P0C0L5|CO4B_HUMAN	VEYGFQVK	sp|P00450|CERU_HUMAN	GEFYIGSK
sp|P02787|TRFE_HUMAN	EGTCPEAPTDECKPVK	sp|P0DOX5|IGG1_HUMAN	LTVDK	sp|P02787|TRFE_HUMAN	KPVDEYKDCHLAQVPSHTVVAR
sp|P02760|AMBP_HUMAN	ECLQTCR	sp|P25311|ZA2G_HUMAN	IDVHWTR	sp|P06681|CO2_HUMAN	AVISPGFDVFAK
sp|P08603|CFAH_HUMAN	WQSIPLCVEK	sp|Q03591|FHR1_HUMAN	EIMENYNIALR	sp|P01009|A1AT_HUMAN	TDTSHHDQDHPTFNK

sp|P04003|C4BPA_HUMAN	EEIIYECDK	sp|P04114|APOB_HUMAN	ENFAGEATLQR	sp|P02768|ALBU_HUMAN	YICENQDSISSK
sp|P25311|ZA2G_HUMAN	AGEVQEPELR	sp|P0C0L4|CO4A_HUMAN	VDVQAGACEGK	sp|P04114|APOB_HUMAN	ALVEQGFTVPEIK
sp|P01023|A2MG_HUMAN	LHTEAQIQEEGTVVELTGR	sp|P02750|A2GL_HUMAN	DGFDISGNPWICDQNLSDLYR	sp|P01024|CO3_HUMAN	LPYSVVR
sp|P02647|APOA1_HUMAN	KWQEEMELYR	sp|P0CF74|IGLC6_HUMAN	AAPSVTLFPPSSEELQANK	sp|P19823|ITIH2_HUMAN	VQSTITSR
sp|P01860|IGHG3_HUMAN	EPQVYTLPPSREEMTK	sp|P10643|CO7_HUMAN	SCVGETTESTQCEDEELEHLR	sp|P01023|A2MG_HUMAN	SLFTDLEAENDVLHCVAFAVPK
sp|P02748|CO9_HUMAN	FEGIACEISK	sp|P00450|CERU_HUMAN	DVDKEFYLFPTVFDENESLLLEDNIR	sp|P02787|TRFE_HUMAN	DQYELLCLDNTR
sp|P0DOX2|IGA2_HUMAN	GTTVTVSSASPTSPK	sp|P02750|A2GL_HUMAN	LQELHLSSNGLESLSPEFLRPVPQLR	sp|P23083|HV102_HUMAN	SDDTAVYYCAR
sp|P02647|APOA1_HUMAN	DLATVYVDVLK	sp|P00739|HPTR_HUMAN	NPANPVQR	sp|P08603|CFAH_HUMAN	AVYTCNEGYQLLGEINYR
sp|P01024|CO3_HUMAN	ASHLGLAR	sp|P01024|CO3_HUMAN	SLYVSATVILHSGSDMVQAER	sp|P36955|PEDF_HUMAN	ALYYDLISSPDIHGTYK
sp|P01042|KNG1_HUMAN	TWQDCEYK	sp|P0C0L5|CO4B_HUMAN	HLVPGAPFLLQALVR	sp|Q96PD5|PGRP2_HUMAN	EFTEAFLGCPAIHPR
sp|Q9UPR6|ZFR2_HUMAN	VLGMDLLPPR	sp|P01591|IGJ_HUMAN	CYTAVVPLVYGGETK	sp|P02751|FINC_HUMAN	DDKESVPISDTIIPAVPPPTDLR
sp|P05155|IC1_HUMAN	LVLLNAIYLSAK	sp|P19823|ITIH2_HUMAN	FYNQVSTPLLR	sp|P0C0L5|CO4B_HUMAN	VGDTLNLNLR
sp|P00751|CFAB_HUMAN	DLEIEVVLFHPNYNINGK	sp|P02671|FIBA_HUMAN	QFTSSTSYNR	sp|P05156|CFAI_HUMAN	YQIWTTVVDWIHPDLK
sp|P04217|A1BG_HUMAN	LLELTGPK	sp|P02771|FETA_HUMAN	DLCQAQGVALQTMK	sp|P0C0L5|CO4B_HUMAN	RGHLFLQTDQPIYNPGQR
sp|P00739|HPTR_HUMAN	ILGGHLDAK	sp|P02768|ALBU_HUMAN	DDNPNLPR	sp|A0A075B6H9|LV469_HUMAN	FSGSSSGAER
sp|P02751|FINC_HUMAN	LLCQCLGFGSGHFR	sp|P35858|ALS_HUMAN	VAGLLEDTFPGLLGLR	sp|P01031|CO5_HUMAN	MVETTAYALLTSLNLK
sp|P0C0L5|CO4B_HUMAN	STQDTVIALDALSAYWIASHTTEER	sp|P19823|ITIH2_HUMAN	IQPSGGTNINEALLR	sp|P01023|A2MG_HUMAN	SSSNEEVMFLTVQVK
sp|P00734|THRB_HUMAN	ETWTANVGK	sp|P0DOX5|IGG1_HUMAN	EPQVYTLPPSR	sp|P02771|FETA_HUMAN	KPTPASIPLFQVPEPVTSCEAYEEDRETFMNK
sp|P00738|HPT_HUMAN	HYEGSTVPEKK	sp|P01011|AACT_HUMAN	DLDSQTMMVLVNYIFFK	sp|P00450|CERU_HUMAN	GPEEEHLGILGPVIWAEVGDTIR
sp|Q06033|ITIH3_HUMAN	EHLVQATPENLQEAR	sp|P0C0L4|CO4A_HUMAN	TTNIQGINLLFSSR	sp|P68871|HBB_HUMAN	LHVDPENFR
sp|P25311|ZA2G_HUMAN	EDIFMETLK	sp|P0DJI9|SAA2_HUMAN	AYSDMR	sp|P01023|A2MG_HUMAN	TTVMVK
sp|P0C0L5|CO4B_HUMAN	AEFQDALEK	sp|P0C0L5|CO4B_HUMAN	AEMADQAAAWLTR	sp|P02787|TRFE_HUMAN	TAGWNIPMGLLYNK
sp|P0C0L4|CO4A_HUMAN	DKGQAGLQR	sp|Q14624|ITIH4_HUMAN	SFAAGIQALGGTNINDAMLMAVQLLDSSNQEER	sp|P01024|CO3_HUMAN	DSITTWEILAVSMSDK
sp|P01011|AACT_HUMAN	FSISR	sp|P01011|AACT_HUMAN	KLINDYVK	sp|P02787|TRFE_HUMAN	DCHLAQVPSHTVVAR

Protein	Peptide	Protein	Peptide	Protein	Peptide
sp|P50213|IDH3A_HUMAN	IAEFAFEYAR	sp|P01861|IGHG4_HUMAN	VVSVLTVLHQDWLNGK	sp|P01877|IGHA2_HUMAN	SVTCHVK
sp|P19827|ITIH1_HUMAN	FAHYVVTSQVVNTANEAR	sp|P00751|CFAB_HUMAN	EELLPAQDIK	sp|P04114|APOB_HUMAN	TGISPLALIK
sp|Q13790|APOF_HUMAN	SYDLDPGAGSLEI	sp|P19652|A1AG2_HUMAN	TEDTIFLR	sp|P01009|A1AT_HUMAN	FNKPFVFLMIEQNTK
sp|P01871|IGHM_HUMAN	EQLNLR	sp|P02654|APOC1_HUMAN	ELISR	sp|P0CF74|IGLC6_HUMAN	YAASSYLSLTPEQWK
sp|P01859|IGHG2_HUMAN	WYVDGVEVHNAK	sp|A0A0B4J1U7|HV601_HUMAN	GLEWLGR	sp|P0DJI9|SAA2_HUMAN	GPGGAWAAEVISNAR
sp|P01011|AACT_HUMAN	ITDLIK	sp|P01023|A2MG_HUMAN	SPCYGYQWVSEEHEEAHHTAYLVFSPSK	sp|P02787|TRFE_HUMAN	HQTVPQNTGGK
sp|P00747|PLMN_HUMAN	TPENYPNAGLTMNYCR	sp|O43866|CD5L_HUMAN	DVAVLCR	sp|P19823|ITIH2_HUMAN	LWAYLTINQLLAER
sp|P02743|SAMP_HUMAN	IVLGQEQDSYGGK	sp|P19827|ITIH1_HUMAN	EVAFDLEIPK	sp|P00751|CFAB_HUMAN	LLQEGQALEYVCPSGFYPYPVQTR
sp|P01024|CO3_HUMAN	VYAYYNLEESCTR	sp|P02765|FETUA_HUMAN	EHAVEGDCDFQLLK	sp|Q14624|ITIH4_HUMAN	LCVDPR
sp|P0C0L5|CO4B_HUMAN	NFLVR	sp|P19652|A1AG2_HUMAN	SDVMYTDWK	sp|P01860|IGHG3_HUMAN	STSGGTAALGCLVK
sp|Q14624|ITIH4_HUMAN	ANTVQEATFQMELPK	sp|P01024|CO3_HUMAN	GYTQQLAFR	sp|P04114|APOB_HUMAN	TLADLTLLDSPIK
sp|P02768|ALBU_HUMAN	ALVLIAFAQYLQQCPFEDHVK	sp|P02771|FETA_HUMAN	ITECCK	sp|P0C0L4|CO4A_HUMAN	VGLSGMAIADVTLLSGFHALR
sp|P01861|IGHG4_HUMAN	GPSVFPLAPCSR	sp|P0C0L5|CO4B_HUMAN	EMSGSPASGIPVK	sp|P01766|HV313_HUMAN	FTISR
sp|P02647|APOA1_HUMAN	LHELQEK	sp|P0C0L5|CO4B_HUMAN	GQIVFMNR	sp|P01023|A2MG_HUMAN	HNVYINGITYTPVSSTNEK
sp|P0C0L4|CO4A_HUMAN	LGQYASPTAK	sp|P04114|APOB_HUMAN	IYSLWEHSTK	sp|A0A0C4DH38|HV551_HUMAN	GLEWMGIIYPGDSDTR
sp|P01024|CO3_HUMAN	EPGQDLVVLPLSITTDFIPSFR	sp|P0DOX5|IGG1_HUMAN	EEQYNSTYR	sp|P0C0L5|CO4B_HUMAN	ALEILQEEDLIDEDDIPVR
sp|P0C0L4|CO4A_HUMAN	EFHLHLR	sp|P02647|APOA1_HUMAN	LAEYHAK	sp|P01023|A2MG_HUMAN	SLNEEAVK
sp|P04114|APOB_HUMAN	IEGNLIFDPNNYLPK	sp|P02765|FETUA_HUMAN	HTLNQIDEVK	sp|P04114|APOB_HUMAN	TPALHFK
sp|P0C0L5|CO4B_HUMAN	LLLFSPSVVHLGVPLSVGVQLQDVPR	sp|P04003|C4BPA_HUMAN	GSSVIHCDADSK	sp|A0A0B4J1V6|HV373_HUMAN	FTISR
sp|P01861|IGHG4_HUMAN	FNWYVDGVEVHNAK	sp|P0C0L4|CO4A_HUMAN	SHALQLNNR	sp|P0C0L4|CO4A_HUMAN	GLCVATPVQLR
sp|P08603|CFAH_HUMAN	EFDHNSNIR	sp|P01023|A2MG_HUMAN	LLLQQVSLPELPGEYSMK	sp|P02647|APOA1_HUMAN	AKPALEDLR
sp|P0DOX6|IGM_HUMAN	GEPLSPEK	sp|P01023|A2MG_HUMAN	MCPQLQQYEMHGPEGLR	sp|P02749|APOH_HUMAN	VCPFAGILENGAVR
sp|P01860|IGHG3_HUMAN	TPEVTCVVVDVSHEDPEVQFK	sp|P02790|HEMO_HUMAN	FDPVR	sp|P01011|AACT_HUMAN	LYGSEAFATDFQDSAAAK
sp|P19652|A1AG2_HUMAN	EQLGEFYEALDCLCIPR	sp|P02768|ALBU_HUMAN	LVRPEVDVMCTAFHDNEETFLK	sp|P02774|VTDB_HUMAN	LPDATPTELAK

sp|P01009|A1AT_HUMAN	GTEAAGAMFLEAIPMSIPPEVK	sp|P0C0L5|CO4B_HUMAN	GQAGLQR	sp|P00739|HPTR_HUMAN	VMPICLPSK
sp|P01024|CO3_HUMAN	QDSLSSQNQLGVLPLSWDIPELVNMGQWK	sp|P0DOX5|IGG1_HUMAN	FNWYVDGVEVHNAK	sp|P02790|HEMO_HUMAN	DYFMPCPGR
sp|P00739|HPTR_HUMAN	NYAEVGR	sp|P0C0L4|CO4A_HUMAN	GHLFLQTDQPIYNPGQR	sp|P04114|APOB_HUMAN	GMTRPLSTLISSSQSCQYTLDAK
sp|P01009|A1AT_HUMAN	QINDYVEK	sp|P0C0L5|CO4B_HUMAN	SMQGGLVGNDETVALTAFVTIALHHGLAVFQDEGAEPLK	sp|P0C0L4|CO4A_HUMAN	EMSGSPASGIPVK
sp|P06727|APOA4_HUMAN	SLAPYAQDTQEK	sp|P01860|IGHG3_HUMAN	WQQGNIFSCSVMHEALHNR	sp|P08603|CFAH_HUMAN	IEGDEEMHCSDDGFWSK
sp|P01023|A2MG_HUMAN	VYDYYETDEFAIAEYNAPCSK	sp|P05546|HEP2_HUMAN	QFPILLDFK	sp|P07360|CO8G_HUMAN	SLPVSDSVLSGFEQR
sp|P0C0L4|CO4A_HUMAN	EVYMPSSIFQDDFVIPDISEPGTWK	sp|P02768|ALBU_HUMAN	ADDKETCFAEEGKK	sp|Q9UHR4|BI2L1_HUMAN	LNESLDENFK
sp|P04003|C4BPA_HUMAN	GFVLR	sp|P68871|HBB_HUMAN	SAVTALWGK	sp|P04114|APOB_HUMAN	IAELSATAQEIIK
sp|P0C0L5|CO4B_HUMAN	EFHLHLR	sp|O95445|APOM_HUMAN	EELATFDPVDNIVFNMAAGSAPMQLHLR	sp|P04114|APOB_HUMAN	ITENDIQIALDDAK
sp|P04114|APOB_HUMAN	LQDFSDQLSDYYEK	sp|P0DJI9|SAA2_HUMAN	EANYIGSDK	sp|P02763|A1AG1_HUMAN	EYQTR
sp|P0DOX2|IGA2_HUMAN	QEPSQGTTTYAVTSILR	sp|P01024|CO3_HUMAN	AGDFLEANYMNLQR	sp|P08603|CFAH_HUMAN	TGDEITYQCR
sp|P0DOX7|IGK_HUMAN	GTVAAPSVFIFPPSDEQLK	sp|P02774|VTDB_HUMAN	SCESNSPFPVHPGTAECCTK	sp|P02790|HEMO_HUMAN	GEVPPR
sp|P04114|APOB_HUMAN	SLWDFLK	sp|P00738|HPT_HUMAN	LRTEGDGVYTLNDK	sp|P0DOX5|IGG1_HUMAN	EPQVYTLPPSRDELTK
sp|P02768|ALBU_HUMAN	FQNALLVR	sp|Q96PD5|PGRP2_HUMAN	EYGVVLAPDGSTVAVEPLLAGLEAGLQGR	sp|P02750|A2GL_HUMAN	GQTLLAVAK
sp|Q06033|ITIH3_HUMAN	DYIFGNYIER	sp|P01023|A2MG_HUMAN	VVSMDENFHPLNELIPLVYIQDPK	sp|P0C0L5|CO4B_HUMAN	GLCVATPVQLR
sp|P01871|IGHM_HUMAN	YAATSQVLLPSK	sp|P0DOX5|IGG1_HUMAN	WQQGNVFSCSVMHEALHNHYTQK	sp|P02649|APOE_HUMAN	WELALGR
sp|P02768|ALBU_HUMAN	MPCAEDYLSVVLNQLCVLHEKTPVSDR	sp|P02750|A2GL_HUMAN	TLDLGENQLETLPPDLLR	sp|P01024|CO3_HUMAN	TGLQEVEVK
sp|P06727|APOA4_HUMAN	SLAELGGHLDQQVEEFR	sp|P00450|CERU_HUMAN	EVGPTNADPVCLAK	sp|P01023|A2MG_HUMAN	GGVEDEVTLSAYITIALLEIPLTVTHPVVR
sp|P05090|APOD_HUMAN	NPNLPPETVDSLK	sp|P02655|APOC2_HUMAN	STAAMSTYTGIFTDQVLSVLKGEE	sp|Q9HCJ0|TNR6C_HUMAN	TSSWLVLR
sp|P00751|CFAB_HUMAN	VSEADSSNADWVTK	sp|P02751|FINC_HUMAN	SSPVVIDASTAIDAPSNLR	sp|P0C0L5|CO4B_HUMAN	TTNIQGINLLFSSR

sp|P01008|ANT3_HUMAN	ANRPFLVFIR	sp|P01024|CO3_HUMAN	ADIGCTPGSGK	sp|P00450|CERU_HUMAN	TYCSEPEK
sp|P0C0L5|CO4B_HUMAN	AAANQMR	sp|P04114|APOB_HUMAN	AQIPILR	sp|P04114|APOB_HUMAN	NSEEFAAAMSR
sp|P0C0L5|CO4B_HUMAN	VDFTLSSER	sp|P10909|CLUS_HUMAN	RPHFFFPK	sp|P02750|A2GL_HUMAN	ENQLEVLEVSWLHGLK
sp|P0DOX2|IGA2_HUMAN	DVLVR	sp|P0C0L5|CO4B_HUMAN	DFALLSLQVPLK	sp|P02750|A2GL_HUMAN	ALGHLDLSGNR
sp|P01023|A2MG_HUMAN	SSGSLLNNAIK	sp|P00751|CFAB_HUMAN	EAGIPEFYDYDVALIK	sp|P01871|IGHM_HUMAN	QIQVSWLR
sp|P0C0L5|CO4B_HUMAN	EVYMPSSIFQDDFVIPDISEPGTWK	sp|P01024|CO3_HUMAN	DAPDHQELNLDVSLQLPSR	sp|P02771|FETA_HUMAN	LLACGEGAADIIIGHLCIR
sp|P0DOX7|IGK_HUMAN	TVAAPSVFIFPPSDEQLK	sp|P01042|KNG1_HUMAN	ENFLFLTPDCK	sp|P02647|APOA1_HUMAN	THLAPYSDELR
sp|P04114|APOB_HUMAN	ESQLPTVMDFR	sp|P00738|HPT_HUMAN	LPECEADDGCPKPPEIAHGYVEHSVR	sp|P01024|CO3_HUMAN	VVPEGIR
sp|P01009|A1AT_HUMAN	KQINDYVEK	sp|P08185|CBG_HUMAN	MNTVIAALSR	sp|P0C0L4|CO4A_HUMAN	GLQDEDGYR
sp|P68871|HBB_HUMAN	EFTPPVQAAYQK	sp|P01023|A2MG_HUMAN	VTAAPQSVCALR	sp|P02768|ALBU_HUMAN	LVAASQAALGL
sp|P0C0L4|CO4A_HUMAN	NPSDPMPQAPALWIETTAYALL HLLLHEGK	sp|P02751|FINC_HUMAN	GLKPGVVYEGQLISIQQYGHQEVTR	sp|P0DJI8|SAA1_HUMAN	SFFSFLGEAFDGAR
sp|P0DJI9|SAA2_HUMAN	SFFSFLGEAFDGAR	sp|P01861|IGHG4_HUMAN	WYVDGVEVHNAK	sp|P02749|APOH_HUMAN	WSPELPVCAPIICPPPSIPTFATLR
sp|A0A075B6K5|LV39_HUMAN	RPSGIPER	sp|P06727|APOA4_HUMAN	LTPYADEFK	sp|P02647|APOA1_HUMAN	EQLGPVTQEFWDNLEK
sp|P01023|A2MG_HUMAN	VDLSFSPSQSLPASHAHLR	sp|P01780|HV307_HUMAN	YYVDSVK	sp|P01871|IGHM_HUMAN	VSVFVPPR
sp|P0C0L5|CO4B_HUMAN	TLEIPGNSDPNMIPDGDFNSYVR	sp|P0DOX2|IGA2_HUMAN	AEDTAVYYCAR	sp|P05546|HEP2_HUMAN	FPVEMTHNHNFR
sp|P01024|CO3_HUMAN	KVFLDCCNYITELR	sp|P01024|CO3_HUMAN	QNQELK	sp|P0DP03|HV335_HUMAN	FTISR
sp|P02760|AMBP_HUMAN	TVAACNLPIVR	sp|P01031|CO5_HUMAN	DSEITFIK	sp|P0C0L5|CO4B_HUMAN	SFFPENWLWR
sp|P01591|IGJ_HUMAN	FVYHLSDLCK	sp|P06727|APOA4_HUMAN	TQVNTQAEQLR	sp|P01024|CO3_HUMAN	IEGDHGAR
sp|P04114|APOB_HUMAN	IVQILPWEQNEQVK	sp|P0DOX2|IGA2_HUMAN	SAVEGPPER	sp|P01024|CO3_HUMAN	ENEGFTVTAEGK
sp|P27169|PON1_HUMAN	IQNILTEEPK	sp|P02760|AMBP_HUMAN	AFIQLWAFDAVK	sp|P02787|TRFE_HUMAN	HSTIFENLANK
sp|P05546|HEP2_HUMAN	YEITTIHNLFR	sp|P51884|LUM_HUMAN	ISNIPDEYFK	sp|P01877|IGHA2_HUMAN	VAAEDWK
sp|P01871|IGHM_HUMAN	QVGSGVTTDQVQAEAK	sp|P00734|THRB_HUMAN	HQDFNSAVQLVENFCR	sp|P10909|CLUS_HUMAN	VTTVASHTSDSDVPSGVTEVVVK
sp|P01008|ANT3_HUMAN	LQPLDFK	sp|P02652|APOA2_HUMAN	VKSPELQAEAK	sp|P02749|APOH_HUMAN	TFYEPGEEITYSCKPGYVSR
sp|P01009|A1AT_HUMAN	LQHLENELTHDIITK	sp|P01023|A2MG_HUMAN	QFSFPLSSEPFQGSYK	sp|P00747|PLMN_HUMAN	QLGAGSIEECAAK

sp|P0C0L5|CO4B_HUMAN	VVEEQESR	sp|P02652|APOA2_HUMAN	SKEQLTPLIK	sp|P04217|A1BG_HUMAN	CEGPIPDVTFELLR
sp|P08603|CFAH_HUMAN	GDAVCTESGWRPLPSCEEK	sp|P02787|TRFE_HUMAN	DDTVCLAK	sp|P0DP03|HV335_HUMAN	AEDTAVYYCAK
sp|P01859|IGHG2_HUMAN	FNWYVDGVEVHNAK	sp|P01860|IGHG3_HUMAN	WYVDGVEVHNAK	sp|P01876|IGHA1_HUMAN	TFTCTAAYPESK
sp|P02763|A1AG1_HUMAN	TEDTIFLR	sp|P02768|ALBU_HUMAN	CASLQK	sp|P01859|IGHG2_HUMAN	GPSVFPLAPCSR
sp|P0C0L4|CO4A_HUMAN	EPFLSCCQFAESLR	sp|P01766|HV313_HUMAN	AGDTAVYYCAR	sp|P02787|TRFE_HUMAN	DGAGDVAFVK
sp|P02647|APOA1_HUMAN	QGLLPVLESFK	sp|P02787|TRFE_HUMAN	GDVAFVK	sp|P0DOX5|IGG1_HUMAN	TPEVTCVVVDVSHEDPEVK
sp|P00747|PLMN_HUMAN	DVVLFEK	sp|P68871|HBB_HUMAN	VHLTPEEK	sp|P0C0L4|CO4A_HUMAN	GQAGLQR
sp|P04114|APOB_HUMAN	SVSLPSLDPASAK	sp|P02790|HEMO_HUMAN	EWFWDLATGTMK	sp|P01024|CO3_HUMAN	AEDLVGK
sp|P0DOX6|IGM_HUMAN	GFPSVLR	sp|P01859|IGHG2_HUMAN	TTPPMLDSDGSFFLYSK	sp|P04114|APOB_HUMAN	VIGNMGQTMEQLTPELK
sp|P04114|APOB_HUMAN	LAPGELTIIL	sp|P02763|A1AG1_HUMAN	NWGLSVYADKPETTK	sp|P01024|CO3_HUMAN	LVAYYTLIGASGQR
sp|P0DOY2|IGLC2_HUMAN	SYSCQVTHEGSTVEK	sp|P0C0L4|CO4A_HUMAN	MRPSTDTITVMVENSHGLR	sp|P02647|APOA1_HUMAN	LREQLGPVTQEFWDNLEKETEGLR
sp|P01031|CO5_HUMAN	GIYGTISR	sp|P02771|FETA_HUMAN	DFNQFSSGEK	sp|P01701|LV151_HUMAN	LLIYDNNK
sp|P02768|ALBU_HUMAN	RHPDYSVVLLLR	sp|P01024|CO3_HUMAN	FVTVQATFGTQVVEK	sp|P00738|HPT_HUMAN	NPANPVQR
sp|P02771|FETA_HUMAN	HEMTPVNPGVGQCCTSSYANR	sp|P01024|CO3_HUMAN	SDDKVTLEER	sp|P00450|CERU_HUMAN	GVYSSDVFDIFPGTYQTLEMFPR
sp|P04217|A1BG_HUMAN	ATWSGAVLAGR	sp|P08697|A2AP_HUMAN	DSFHLDEQFTVPVEMMQAR	sp|A0A0B4J1Y9|HV372_HUMAN	TEDTAVYYCAR
sp|P01011|AACT_HUMAN	NLAVSQVVHK	sp|Q14624|ITIH4_HUMAN	SPEQQETVLDGNLIIR	sp|A0A0B4J1X5|HV374_HUMAN	GLVWVSR
sp|P04114|APOB_HUMAN	ADYVETVLDSTCSSTVQFLEYELNVLGTHK	sp|P02774|VTDB_HUMAN	ELSSFIDK	sp|P00738|HPT_HUMAN	DYAEVGR
sp|P00734|THRB_HUMAN	RQECSIPVCGQDQVTVAMTPR	sp|P02768|ALBU_HUMAN	QTALVELVK	sp|P0C0L4|CO4A_HUMAN	LHLETDSLALVALGALDTALYAAGSK
sp|Q14624|ITIH4_HUMAN	QGPVNLLSDPEQGVEVTGQYER	sp|P00450|CERU_HUMAN	DIASGLIGPLIICK	sp|P01023|A2MG_HUMAN	VTGEGCVYLQTSLK
sp|P01859|IGHG2_HUMAN	WQQGNVFSCSVMHEALHNHYTQK	sp|A0M8Q6|IGLC7_HUMAN	YAASSYLSLTPEQWK	sp|P01834|IGKC_HUMAN	DSTYSLSSTLTLSK
sp|A0A0C4DH72|KV106_HUMAN	LLIYAASSLQSGVPSR	sp|P19827|ITIH1_HUMAN	GSLVQASEANLQAAQDFVR	sp|P00739|HPTR_HUMAN	VLVNER

sp|P0C0L5|CO4B_HUMAN	YVLPNFEVK	sp|P05155|IC1_HUMAN	LLDSLPSDTR	sp|P0C0L4|CO4A_HUMAN	TYNVLDMK
sp|P01024|CO3_HUMAN	AFSDR	sp|P05546|HEP2_HUMAN	EYYFAEAQIADFSDPAFISK	sp|P00739|HPTR_HUMAN	SPVGVQPILNEHTFCVGMSK
sp|P02647|APOA1_HUMAN	AHVDALR	sp|P0DOY2|IGLC2_HUMAN	AGVETTTPSK	sp|Q14624|ITIH4_HUMAN	SIQNNVR
sp|P04114|APOB_HUMAN	VELEVPQLCSFILK	sp|P01871|IGHM_HUMAN	DGFFGNPR	sp|P01024|CO3_HUMAN	TMQALPYSTVGNSNNYLHLSVLR
sp|P02787|TRFE_HUMAN	APNHAVVTR	sp|P00736|C1R_HUMAN	QRPPDLDTSSNAVDLLFFTDESGDSR	sp|O14791|APOL1_HUMAN	ILQADQEL
sp|P0C0L4|CO4A_HUMAN	SFFPENWLWR	sp|P01024|CO3_HUMAN	KVLLDGVQNPR	sp|P02679|FIBG_HUMAN	EGFGHLSPTGTTEFWLGNEK
sp|P02768|ALBU_HUMAN	VPQVSTPTLVEVSR	sp|P10909|CLUS_HUMAN	LFDSDPITVTVPVEVSR	sp|P01024|CO3_HUMAN	YFKPGMPFDLMVFVTNPDGSPAYR
sp|P01624|KV315_HUMAN	ATGIPAR	sp|P01042|KNG1_HUMAN	AVDAALK	sp|P43652|AFAM_HUMAN	RHPDLSIPELLR
sp|P19652|A1AG2_HUMAN	WFYIASAFR	sp|P01019|ANGT_HUMAN	LQAILGVPWK	sp|P01009|A1AT_HUMAN	SPLFMGK
sp|P00751|CFAB_HUMAN	LQDEDLGFL	sp|P0C0L5|CO4B_HUMAN	LGQYASPTAK	sp|P01624|KV315_HUMAN	ATLSCR
sp|P02647|APOA1_HUMAN	ATEHLSTLSEK	sp|P00738|HPT_HUMAN	GSFPWQAK	sp|P04114|APOB_HUMAN	IADFELPTIIVPEQTIEIPSIK
sp|P01834|IGKC_HUMAN	SGTASVVCLLNNFYPR	sp|P05156|CFAI_HUMAN	AQLGDLPWQVAIK	sp|P04114|APOB_HUMAN	DLGQCDR
sp|P19823|ITIH2_HUMAN	FLHVPDTFEGHFDGVPVISK	sp|P08603|CFAH_HUMAN	NTEILTGSWSDQTYPEGTQAIYK	sp|P00734|THRB_HUMAN	GQPSVLQVVNLPIVERPVCK
sp|Q14624|ITIH4_HUMAN	AGFSWIEVTFK	sp|P00751|CFAB_HUMAN	CLVNLIEK	sp|P43652|AFAM_HUMAN	ELISLVEDVSSNYDGCCEGDVVQCIR
sp|P01714|LV319_HUMAN	ITCQGDSLR	sp|P06727|APOA4_HUMAN	LLPHANEVSQK	sp|P04196|HRG_HUMAN	RPSEIVIGQCK
sp|P0C0L4|CO4A_HUMAN	GPEVQLVAHSPWLK	sp|P0C0L4|CO4A_HUMAN	AACAQLNDFLQEYGTQGCQV	sp|P01877|IGHA2_HUMAN	QEPSQGTTTYAVTSILR
sp|P02790|HEMO_HUMAN	SGAQATWTELPWPHEK	sp|P02787|TRFE_HUMAN	DLLFR	sp|P01624|KV315_HUMAN	LLIYGASTR
sp|P00738|HPT_HUMAN	VVLHPNYSQVDIGLIK	sp|P01023|A2MG_HUMAN	AVDQSVLLMKPDAELSASSVYNLLPEK	sp|P01011|AACT_HUMAN	EQLSLLDR
sp|Q14624|ITIH4_HUMAN	EAVSGR	sp|P01023|A2MG_HUMAN	YDVENCLANK	sp|P07996|TSP1_HUMAN	GGVNDNFQGVLQNVR
sp|P02787|TRFE_HUMAN	WCAVSEHEATK	sp|P01023|A2MG_HUMAN	FQVDNNNR	sp|P02787|TRFE_HUMAN	ASYLDCIR
sp|P02743|SAMP_HUMAN	AYSLFSYNTQGR	sp|P06727|APOA4_HUMAN	ENADSLQASLRPHADELK	sp|P01024|CO3_HUMAN	IFTVNHK
sp|P05543|THBG_HUMAN	GTEAAAVPEVELSDQPENTFLHPIIQIDR	sp|P02768|ALBU_HUMAN	NYAEAK	sp|P02774|VTDB_HUMAN	LCMAALK
sp|P01023|A2MG_HUMAN	ALLAYAFALAGNQDK	sp|O43866|CD5L_HUMAN	LEVLHK	sp|P04114|APOB_HUMAN	SHDELPR

sp|P19823|ITIH2_HUMAN	TILDDLRAEDHFSVIDFNQNIR	sp|P0C0L4|CO4A_HUMAN	AVGSGATFSHYYYMILSR	sp|P04196|HRG_HUMAN	ALDLINK
sp|P01019|ANGT_HUMAN	SLDFTELDVAAEK	sp|P0DOX8|IGL1_HUMAN	TVAPTECS	sp|P02771|FETA_HUMAN	AENAVECFQTK
sp|P0DJI9|SAA2_HUMAN	GNYDAAK	sp|P06681|CO2_HUMAN	DFHINLFR	sp|P06396|GELS_HUMAN	DPDQTDGLGLSYLSSHIANVER
sp|P02787|TRFE_HUMAN	EDLIWELLNQAQEHFGK	sp|P04114|APOB_HUMAN	IAIANIIDEIIEK	sp|P02751|FINC_HUMAN	NFLVR
sp|P04114|APOB_HUMAN	LQAEAR	sp|P01871|IGHM_HUMAN	GVALHRPDVYLLPPAR	sp|P04114|APOB_HUMAN	SPAFTDLHLR
sp|P02768|ALBU_HUMAN	VHTECCHGDLLECADDR	sp|A0A0A0MRZ8|KVD11_HUMAN	ATGIPAR	sp|P01011|AACT_HUMAN	DEELSCTVVELK
sp|P08603|CFAH_HUMAN	RPYFPVAVGK	sp|P22792|CPN2_HUMAN	GQVVPALNEK	sp|P01024|CO3_HUMAN	EVVADSVWVDVK
sp|P04114|APOB_HUMAN	ETLEDTR	sp|P05546|HEP2_HUMAN	GETHEQVHSILHFK	sp|O43866|CD5L_HUMAN	GQWGTVCDDGWDIK
sp|Q14624|ITIH4_HUMAN	ILDDLSPR	sp|P04114|APOB_HUMAN	SVGFHLPSR	sp|P02647|APOA1_HUMAN	VSFLSALEEYTK
sp|P01871|IGHM_HUMAN	DVMQGTDEHVVCK	sp|P02787|TRFE_HUMAN	EFQLFSSPHGK	sp|P0DOX6|IGM_HUMAN	YAATSQVLLPSK
sp|P19827|ITIH1_HUMAN	ELAAQTIK	sp|P01024|CO3_HUMAN	DFDFVPPVVR	sp|P02765|FETUA_HUMAN	HTFMGVVSLGSPSGEVSHPR
sp|P0C0L5|CO4B_HUMAN	GLQDEDGYR	sp|P02768|ALBU_HUMAN	ALLVR	sp|P04003|C4BPA_HUMAN	CEWETPEGCEQVLTGK
sp|P02787|TRFE_HUMAN	NLNEKDYELLCLDGTR	sp|P00751|CFAB_HUMAN	VSVGGEK	sp|P02768|ALBU_HUMAN	AACLLPK
sp|P01024|CO3_HUMAN	QELSEAEQATR	sp|P0DOX2|IGA2_HUMAN	SVTCHVK	sp|P02647|APOA1_HUMAN	QKVEPLR
sp|P0DOX8|IGL1_HUMAN	ANPTVTLFPPSSEELQANK	sp|P02771|FETA_HUMAN	IMSYICSQQDTLSNK	sp|P01825|HV459_HUMAN	LSSVTAADTAVYYCAR
sp|P0DOX6|IGM_HUMAN	FTCTVTHTDLPSPLK	sp|P02760|AMBP_HUMAN	GECVPGEQEPEPILIPR	sp|P0DOX8|IGL1_HUMAN	YAASSYLSLTPEQWK
sp|P01024|CO3_HUMAN	SYTVAIAGYALAQMGR	sp|P0DOX5|IGG1_HUMAN	WYVDGVEVHNAK	sp|P02751|FINC_HUMAN	VVTPLSPPTNLHLEANPDTGVLTVSWER
sp|P06396|GELS_HUMAN	SEDCFILDHGK	sp|P0C0L4|CO4A_HUMAN	LELSVDGAK	sp|P04114|APOB_HUMAN	SPSQADINK
sp|P02765|FETUA_HUMAN	AQLVPLPPSTYVEFTVSGTDCVAK	sp|P04003|C4BPA_HUMAN	WTPYQGCEALCCPEPK	sp|P01877|IGHA2_HUMAN	VPPPPPCCHPR
sp|P0DOX7|IGK_HUMAN	VTITCR	sp|P02751|FINC_HUMAN	VDVIPVNLPGEHGQR	sp|P01011|AACT_HUMAN	ITLLSALVETR
sp|P02768|ALBU_HUMAN	DVFLGMFLYEYAR	sp|P02671|FIBA_HUMAN	GLIDEVNQDFTNR	sp|P01024|CO3_HUMAN	NTLIIYLDK
sp|P02774|VTDB_HUMAN	GQELCADYSENTFTEYK	sp|P02771|FETA_HUMAN	RPCFSSLVVDETYVPPAFSDDK	sp|P19827|ITIH1_HUMAN	QYYEGSEIVVAGR

sp|P0C0L5|CO4B_HUMAN	GSVFLR	sp|P01031|CO5_HUMAN	ALVEGVDQLFTDYQIK	sp|P01743|HV146_HUMAN	SEDTAVYYCAR
sp|P01834|IGKC_HUMAN	VYACEVTHQGLSSPVTK	sp|P01594|KV133_HUMAN	LLIYDASNLETGVPSR	sp|P0DOX6|IGM_HUMAN	ALEWLAR
sp|P0DOX5|IGG1_HUMAN	TTPPVLDSDGSFFLYSK	sp|P0DJI8|SAA1_HUMAN	AYSDMR	sp|Q06033|ITIH3_HUMAN	LWAYLTIEQLLEK
sp|P0DOX5|IGG1_HUMAN	THTCPPCPAPELLGGPSVFLFPPK PK	sp|P00738|HPT_HUMAN	LRTEGDGVYTLNNEK	sp|O75636|FCN3_HUMAN	GVGHPYR
sp|P01009|A1AT_HUMAN	DTVFALVNYIFFK	sp|P01624|KV315_HUMAN	LLIYGASTRATGIPAR	sp|P04114|APOB_HUMAN	GSVLSR
sp|P01023|A2MG_HUMAN	FEVQVTVPK	sp|P0DOX6|IGM_HUMAN	NVPLPVIAELPPK	sp|P0C0L5|CO4B_HUMAN	VGLSGMAIADVTLLSGFHALR
sp|P0DOX7|IGK_HUMAN	VYACEVTHQGLSSPVTK	sp|P0DOX6|IGM_HUMAN	YVTSAPMPEPQAPGR	sp|A0A0B4J1V6|HV373_H UMAN	GLEWVGR
sp|P01024|CO3_HUMAN	EDIPPADLSDQVPDTESETR	sp|O43866|CD5L_HUMAN	EATLQDCPSGPWGK	sp|A0A0C4DH38|HV551_H UMAN	ASDTAMYYCAR
sp|P02771|FETA_HUMAN	KPTPASIPLFQVPEPVTSCEAYEE DR	sp|P0C0L4|CO4A_HUMAN	DHAVDLIQK	sp|P02790|HEMO_HUMAN	QGHNSVFLIK

Table S4 Differential expression proteins filtered from mdCATs DIA quantification of 21 human serum.

	ID	Entry	lev	pvalue	fc	log(FoldChange)	-log(pvalue)	sig
1	P08697	A2AP	0.018157	0.007495	0.621472	-0.68624	7.05977	down
2	P02760	AMBP	0.077769	1.62E-05	0.605891	-0.72287	15.91547	down
3	P05090	APOD	0.047224	0.000535	1.878491	0.909574	10.86746	up
4	P02649	APOE	0.017675	4.59E-06	0.639602	-0.64475	17.73177	down
5	P08185	CBG	0.002242	0.005377	0.442845	-1.17512	7.538911	down
6	P06681	CO2	0.112869	0.030043	1.371948	0.456226	5.05684	up
7	P13671	CO6	0.004926	0.000252	0.336167	-1.57275	11.95233	down
8	P10643	CO7	0.001727	8.73E-05	1.694949	0.761242	13.48425	up
9	Q03591	CFHR1	0.00065	7.28E-09	0.328254	-1.60712	27.03273	down
10	P02671	FIBA	0.007809	0.000252	1.828676	0.870799	11.95236	up
11	P04196	HRG	0.05172	0.001109	1.692974	0.75956	9.816808	up
12	P01782	HV309	0.142328	0.000336	0.647356	-0.62737	11.5408	down
13	P01772	HV333	0.161285	0.000323	0.647103	-0.62793	11.59776	down
14	A0A0B4J1X5	HV374	0.161285	0.000323	0.647103	-0.62793	11.59776	down
15	A0A0J9YVY3	HV741	0.243781	0.00011	0.589241	-0.76307	13.15674	down
16	P50213	IDH3A	0.022907	0.000584	1.555407	0.637292	10.74166	up
17	Q06033	ITIH3	0.217803	0.000372	1.837598	0.877821	11.39328	up
18	P01624	KV315	0.000834	2.81E-05	2.432804	1.28262	15.11947	up
19	P01619	KV320	9.28E-05	3.37E-05	3.114743	1.639113	14.85591	up
20	A0A0A0MRZ8	KVD11	8.9E-05	6.15E-05	1.950751	0.964029	13.98994	up
21	P18428	LBP	0.022844	0.007412	0.352637	-1.50375	7.075983	down
22	Q9H1C0	LPAR5	0.023606	1.16E-08	0.334008	-1.58204	26.35557	down
23	Q96PD5	PGRP2	0.001421	0.001395	0.407898	-1.29372	9.486025	down
24	P35542	SAA4	0.150559	0.002399	0.570855	-0.8088	8.703384	down
25	Q66K66	TM198	0.134209	0.000241	1.605782	0.683276	12.02	up
26	P02766	TTHY	0.000512	1.98E-07	0.450554	-1.15023	22.26808	down
27	P04004	VTNC	0.564499	7E-09	0.613816	-0.70412	27.09094	down

References

1   Z. J. Kaminski, B. Kolesi ´ nska, J. Kolesi ´ nska, G. Sabatino, ´ M. Chelli, P. Rovero, M. Błaszczyk, M. L. Głʹowka and A. M. Papini, *J. Am. Chem. Soc.*, 2005, **127**, 16912–16920.

2   Q. Gao, H. Zhu, L. Dong, W. Shi, R. Chen, Z. Song, C. Huang, J. Li, X. Dong, Y. Zhou, Q. Liu, L. Ma, X. Wang, J. Zhou, Y. Liu, E. Boja, A. I. Robles, W. Ma, P. Wang, Y. Li, L. Ding, B. Wen, B. Zhang, H. Rodriguez, D. Gao, H. Zhou and J. Fan, *Cell*, 2019, **179**, 561-577 e522.

3   Y. Jiang, A. Sun, Y. Zhao, W. Ying, H. Sun, X. Yang, B. Xing, W. Sun, L. Ren, B. Hu, C. Li, L. Zhang, G. Qin, M. Zhang, N. Chen, M. Zhang, Y. Huang, J. Zhou, Y. Zhao, M. Liu, X. Zhu, Y. Qiu, Y. Sun, C. Huang, M. Yan, M. Wang, W. Liu, F. Tian, H. Xu, J. Zhou, Z. Wu, T. Shi, W. Zhu, J. Qin, L. Xie, J. Fan, X. Qian, F. He and C. Chinese Human Proteome Project, *Nature*, 2019, **567**, 257-261.