

Supporting Information

Peptide-tight ESI/MSⁿ analysis with segment of nano-HPLC effluent

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Table-SI-1 The identified proteins list using routine on-line HPLC-MS² method

1)Run 1

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806687 ref NP_621858.1	1	13.4	alanine dehydrogenase
2	gi 20806791 ref NP_621962.1	1	16.8	putative peroxiredoxin
3	gi 20807075 ref NP_622246.1	1	22.3	Co-chaperonin GroES (HSP10)
4	gi 20807076 ref NP_622247.1	1	25.6	chaperonin GroEL
5	gi 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
6	gi 20807145 ref NP_622316.1	1	9.3	dehydrogenase and related proteins
7	gi 20807176 ref NP_622347.1	1	8.3	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
8	gi 20807218 ref NP_622389.1	1	4.8	phosphomannomutase
9	gi 20807440 ref NP_622611.1	1	12.7	Ferritin-like protein
10	gi 20807455 ref NP_622626.1	1	13.9	deoxyribose-phosphate aldolase
11	gi 20807461 ref NP_622632.1	1	13.8	pyruvate phosphate dikinase
12	gi 20807480 ref NP_622651.1	1	3.1	uncharacterized flavoproteins
13	gi 20807729 ref NP_622900.1	1	10.1	Xaa-Pro aminopeptidase
14	gi 20807815 ref NP_622986.1	1	9.1	aspartate aminotransferase
15	gi 20807926 ref NP_623097.1	1	21.1	phosphotransacetylase
16	gi 20808165 ref NP_623336.1	1	6.2	dipeptidase PepV
17	gi 20808178 ref NP_623349.1	1	12.6	enolase
18	gi 20808180 ref NP_623351.1	1	6.3	phosphoglycerate kinase
19	gi 20808181 ref NP_623352.1	1	21.8	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
20	gi 20808197 ref NP_623368.1	1	4.6	uridine kinase
21	gi 20808582 ref NP_623753.1	1	3.9	glutamate dehydrogenase/leucine dehydrogenase
22	gi 20808769 ref NP_623940.1	1	14.4	7-keto-8-aminopelargonate synthetase and related enzyme
23	gi 20808842 ref NP_624013.1	1	13.3	phosphoglycerate mutase 1
24	gi 20809018 ref NP_624189.1	1	23.7	Co-chaperonin GroES (HSP10)
25	gi 20809048 ref NP_624219.1	1	5.8	oligoendopeptidase F
26a	gi 20808676 ref NP_623847.1	1	9.5	elongation factor Tu
26b	gi 20808662 ref NP_623833.1	0		elongation factor Tu
27	gi 161760535 ref NP_622255.2	0.9976	6	phosphoribosylaminoimidazole-succinocarboxamide synthase
28	gi 20806574 ref NP_621745.1	0.9976	3.6	transglutaminase-like enzyme, putative cysteine protease
29	gi 20806612 ref NP_621783.1	0.9976	22.5	transcriptional regulator
30	gi 20806615 ref NP_621786.1	0.9976	16.8	hypothetical protein TTE0086
31	gi 20806616 ref NP_621787.1	0.9976	22.8	uncharacterized ACR involved in oxidation of intracellular sulfur
32	gi 20806617 ref NP_621788.1	0.9976	4.6	dihydroliipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
33	gi 20806675 ref NP_621846.1	0.9976	3.6	ribose 5-phosphate isomerase RpiB
34	gi 20806763 ref NP_621934.1	0.9976	17.3	hypothetical protein TTE0242
35	gi 20806788 ref NP_621959.1	0.9976	4.3	threonine aldolase
36	gi 20806815 ref NP_621986.1	0.9976	2.7	glycine dehydrogenase subunit 1

37	gi 20806821 ref NP_621992.1	0.9976	8.8	hypothetical protein TTE0300
38	gi 20806827 ref NP_621998.1	0.9976	2.8	acetamidase/formamidase
39	gi 20806972 ref NP_622143.1	0.9976	3.2	thymidine phosphorylase
40	gi 20806992 ref NP_622163.1	0.9976	16.8	rubrerythrin
41	gi 20807046 ref NP_622217.1	0.9976	3.4	Acyl-CoA dehydrogenase
42	gi 20807048 ref NP_622219.1	0.9976	5.1	electron transfer flavoprotein subunit alpha
43	gi 20807113 ref NP_622284.1	0.9976	10.3	RNase PH
44	gi 20807119 ref NP_622290.1	0.9976	5.6	ATP-dependent Clp protease proteolytic subunit
45	gi 20807175 ref NP_622346.1	0.9976	5.2	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
46	gi 20807184 ref NP_622355.1	0.9976	2.8	ferredoxin 2
47	gi 20807255 ref NP_622426.1	0.9976	3.6	sensory transduction histidine kinase
48	gi 20807441 ref NP_622612.1	0.9976	4.6	2-oxoglutarate ferredoxin oxidoreductase subunit beta
49	gi 20807444 ref NP_622615.1	0.9976	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
50	gi 20807446 ref NP_622617.1	0.9976	8.8	hypothetical protein TTE0965
51	gi 20807473 ref NP_622644.1	0.9976	7.8	glycerophosphoryl diester phosphodiesterase
52	gi 20807596 ref NP_622767.1	0.9976	9.5	chemotaxis signal transduction protein
53	gi 20807728 ref NP_622899.1	0.9976	10.1	3-dehydroquinate dehydratase
54	gi 20807781 ref NP_622952.1	0.9976	5.1	spermidine synthase
55	gi 20807917 ref NP_623088.1	0.9976	4.2	3-oxoacyl-(acyl-carrier-protein) synthase
56	gi 20808157 ref NP_623328.1	0.9976	25.8	cold shock proteins
57	gi 20808179 ref NP_623350.1	0.9976	6.9	triosephosphate isomerase
58	gi 20808232 ref NP_623403.1	0.9976	2.9	pyruvate kinase
59	gi 20808399 ref NP_623570.1	0.9976	4.7	dihydroxyacetone kinase
60	gi 20808432 ref NP_623603.1	0.9976	19	hypothetical protein TTE2030
61	gi 20808597 ref NP_623768.1	0.9976	8.2	thioredoxin reductase
62	gi 20808609 ref NP_623780.1	0.9976	5.1	3-ketoacyl-(acyl-carrier-protein) reductase
63	gi 20808610 ref NP_623781.1	0.9976	4.6	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
64	gi 20808681 ref NP_623852.1	0.9976	2.6	cysteinyl-tRNA synthetase
65	gi 20808768 ref NP_623939.1	0.9976	2.6	L-threonine 3-dehydrogenase
66	gi 20808832 ref NP_624003.1	0.9976	24.1	hypothetical protein TTE2477
67	gi 20808886 ref NP_624057.1	0.9976	7.5	Zn-dependent hydrolase
68	gi 20808928 ref NP_624099.1	0.9976	15.2	molecular chaperone (small heat shock protein)
69	gi 20809040 ref NP_624211.1	0.9976	3	adenylosuccinate synthetase
70	gi 20806717 ref NP_621888.1	0.9967	2.4	ATPase
71	gi 20806793 ref NP_621964.1	0.9964	24.1	hypothetical protein TTE0272
72	gi 20806636 ref NP_621807.1	0.9919	3.6	hypothetical protein TTE0107
73	gi 20808675 ref NP_623846.1	0.9912	18.4	50S ribosomal protein L33
74	gi 20808397 ref NP_623568.1	0.9867	1.8	hypothetical protein TTE1994
75	gi 20808897 ref NP_624068.1	0.9732	9.8	alpha/beta superfamily hydrolase/acyltransferase
76	gi 20806736 ref NP_621907.1	0.9581	1.6	diaminopimelate decarboxylase

2)Run 2

Number	Protein	Protein	Percent	Description
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		probability	coverage	
1	gi 20806612 ref NP_621783.1	1	30	transcriptional regulator
2	gi 20806617 ref NP_621788.1	1	7.2	dihydrolipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
3	gi 20806675 ref NP_621846.1	1	3.6	ribose 5-phosphate isomerase RpiB
4	gi 20806687 ref NP_621858.1	1	11	alanine dehydrogenase
5	gi 20806716 ref NP_621887.1	1	4	transketolase
6	gi 20806821 ref NP_621992.1	1	8.8	hypothetical protein TTE0300
7	gi 20806827 ref NP_621998.1	1	6.7	acetamidase/formamidase
8	gi 20806958 ref NP_622129.1	1	3.6	urocanate hydratase
9	gi 20807076 ref NP_622247.1	1	24.6	chaperonin GroEL
10	gi 20807145 ref NP_622316.1	1	9.3	dehydrogenase and related proteins
11	gi 20807175 ref NP_622346.1	1	11.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
12	gi 20807176 ref NP_622347.1	1	6.5	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
13	gi 20807218 ref NP_622389.1	1	5.3	phosphomannomutase
14	gi 20807440 ref NP_622611.1	1	18.5	Ferritin-like protein
15	gi 20807441 ref NP_622612.1	1	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
16	gi 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
17	gi 20807446 ref NP_622617.1	1	16.9	hypothetical protein TTE0965
18	gi 20807455 ref NP_622626.1	1	13.9	deoxyribose-phosphate aldolase
19	gi 20807461 ref NP_622632.1	1	19	pyruvate phosphate dikinase
20	gi 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
21	gi 20807698 ref NP_622869.1	1	23.9	hypothetical protein TTE1249
21	gi 20807698 ref NP_622869.1	1	23.9	hypothetical protein TTE1249
22	gi 20807729 ref NP_622900.1	1	10.1	Xaa-Pro aminopeptidase
23	gi 20807815 ref NP_622986.1	1	5.8	aspartate aminotransferase
24	gi 20807926 ref NP_623097.1	1	20.8	phosphotransacetylase
25	gi 20808178 ref NP_623349.1	1	29.1	enolase
26	gi 20808179 ref NP_623350.1	1	10.9	triosephosphate isomerase
27	gi 20808180 ref NP_623351.1	1	9.4	phosphoglycerate kinase
28	gi 20808181 ref NP_623352.1	1	20.3	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
29	gi 20808582 ref NP_623753.1	1	10.1	glutamate dehydrogenase/leucine dehydrogenase
30	gi 20808609 ref NP_623780.1	1	9.8	3-ketoacyl-(acyl-carrier-protein) reductase
31	gi 20808769 ref NP_623940.1	1	18.8	7-keto-8-aminopelargonate synthetase and related enzyme
32	gi 20808842 ref NP_624013.1	1	13.3	phosphoglycerate mutase 1
33	gi 20808954 ref NP_624125.1	1	4.5	CTP synthetase
34	gi 20808970 ref NP_624141.1	1	4.5	NADH:flavin oxidoreductase
35	gi 20809045 ref NP_624216.1	1	8.4	uncharacterized NAD(FAD)-dependent dehydrogenase
36	gi 20809048 ref NP_624219.1	1	7.6	oligoendopeptidase F
37	gi 20809051 ref NP_624222.1	1	11.1	dehydrogenase
38a	gi 20808676 ref NP_623847.1	1	9.5	elongation factor Tu
38b	gi 20808662 ref NP_623833.1	0	10.1	elongation factor Tu
39	gi 20806814 ref NP_621985.1	0.9998	4.9	glycine dehydrogenase subunit 2

40	gi 20807075 ref NP_622246.1	0.9997	35.1	Co-chaperonin GroES (HSP10)
41	gi 20806615 ref NP_621786.1	0.9976	16.8	hypothetical protein TTE0086
42	gi 20806763 ref NP_621934.1	0.9976	17.3	hypothetical protein TTE0242
43	gi 20806788 ref NP_621959.1	0.9976	4.3	threonine aldolase
44	gi 20806791 ref NP_621962.1	0.9976	8.2	putative peroxiredoxin
45	gi 20806815 ref NP_621986.1	0.9976	2.7	glycine dehydrogenase subunit 1
46	gi 20806830 ref NP_622001.1	0.9976	3.1	oxidoreductase
47	gi 20806992 ref NP_622163.1	0.9976	16.8	rubrerythrin
48	gi 20807103 ref NP_622274.1	0.9976	2.7	aspartyl/glutamyl-tRNA amidotransferase subunit B
49	gi 20807177 ref NP_622348.1	0.9976	4.3	dihydrolipoamide acyltransferase
50	gi 20807261 ref NP_622432.1	0.9976	3.7	hypothetical protein TTE0779
51	gi 20807314 ref NP_622485.1	0.9976	4.7	dihydrodipicolinate synthase
52	gi 20807473 ref NP_622644.1	0.9976	7.8	glycerophosphoryl diester phosphodiesterase
53	gi 20807700 ref NP_622871.1	0.9976	18.8	hypothetical protein TTE1251
54	gi 20807728 ref NP_622899.1	0.9976	10.1	3-dehydroquinate dehydratase
55	gi 20807922 ref NP_623093.1	0.9976	5.7	3-oxoacyl-(acyl carrier protein) synthase III
56	gi 20808019 ref NP_623190.1	0.9976	8.1	translation initiation factor eIF-2B alpha subunit
57	gi 20808157 ref NP_623328.1	0.9976	25.8	cold shock proteins
58	gi 20808367 ref NP_623538.1	0.9976	8.3	putative hydrolase
59	gi 20808597 ref NP_623768.1	0.9976	8.2	thioredoxin reductase
60	gi 20808607 ref NP_623778.1	0.9976	8.2	hydroxyethylthiazole kinase
61	gi 20808681 ref NP_623852.1	0.9976	2.8	cysteinyI-tRNA synthetase
62	gi 20808886 ref NP_624057.1	0.9976	7.5	Zn-dependent hydrolase
63	gi 20808928 ref NP_624099.1	0.9976	15.2	molecular chaperone (small heat shock protein)
64	gi 20809018 ref NP_624189.1	0.9976	23.7	Co-chaperonin GroES (HSP10)
65	gi 20808352 ref NP_623523.1	0.9954	7.2	sugar phosphate isomerase/epimerase
66	gi 20808222 ref NP_623393.1	0.9947	1.9	glucan phosphorylase
67	gi 20808482 ref NP_623653.1	0.9947	2.5	hypothetical protein TTE2084
68	gi 20807293 ref NP_622464.1	0.9942	1.5	phosphoribosylformylglycinamide synthase II
69	gi 20807144 ref NP_622315.1	0.9935	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
70	gi 20806793 ref NP_621964.1	0.9916	24.1	hypothetical protein TTE0272
71	gi 20807468 ref NP_622639.1	0.9916	2.3	NADH:flavin oxidoreductase
72	gi 20808165 ref NP_623336.1	0.9902	3.9	dipeptidase PepV
73	gi 20807119 ref NP_622290.1	0.989	5.6	ATP-dependent Clp protease proteolytic subunit
74	gi 20808484 ref NP_623655.1	0.9859	3.7	hypothetical protein TTE2086
75	gi 20808876 ref NP_624047.1	0.9835	2.4	ABC-type dipeptide/oligopeptide/nickel transport systems, periplasmic components
76	gi 20808768 ref NP_623939.1	0.9812	2.6	L-threonine 3-dehydrogenase
77	gi 20807781 ref NP_622952.1	0.9804	5.1	spermidine synthase
78	gi 20808832 ref NP_624003.1	0.979	24.1	hypothetical protein TTE2477
79	gi 20807263 ref NP_622434.1	0.9767	1	valyl-tRNA synthetase
80	gi 20806566 ref NP_621737.1	0.9755	3.3	seryl-tRNA synthetase
81	gi 20806954 ref NP_622125.1	0.9678	1.4	pyruvate:ferredoxin oxidoreductase and related 2-oxoacid:ferredoxin

				oxidoreductase, alpha subunit
82	gi 20807255 ref NP_622426.1	0.9678	3.6	sensory transduction histidine kinase
83	gi 20806616 ref NP_621787.1	0.9675	43.5	uncharacterized ACR involved in oxidation of intracellular sulfur
84	gi 20808004 ref NP_623175.1	0.9579	7.6	peroxiredoxin

3)Run 3

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806612 ref NP_621783.1	1	22.5	transcriptional regulator
2	gi 20806615 ref NP_621786.1	1	26.1	hypothetical protein TTE0086
3	gi 20806687 ref NP_621858.1	1	13.9	alanine dehydrogenase
4	gi 20806716 ref NP_621887.1	1	5.7	transketolase
5	gi 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
6	gi 20806814 ref NP_621985.1	1	3.3	glycine dehydrogenase subunit 2
7	gi 20806815 ref NP_621986.1	1	6.7	glycine dehydrogenase subunit 1
8	gi 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
9	gi 20807076 ref NP_622247.1	1	17.4	chaperonin GroEL
10	gi 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
11	gi 20807145 ref NP_622316.1	1	9	dehydrogenase and related proteins
12	gi 20807218 ref NP_622389.1	1	9	phosphomannomutase
13	gi 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
14	gi 20807441 ref NP_622612.1	1	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
15	gi 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
16	gi 20807461 ref NP_622632.1	1	18.3	pyruvate phosphate dikinase
17	gi 20807473 ref NP_622644.1	1	7.8	glycerophosphoryl diester phosphodiesterase
18	gi 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
19	gi 20807729 ref NP_622900.1	1	5.6	Xaa-Pro aminopeptidase
20	gi 20807815 ref NP_622986.1	1	9.1	aspartate aminotransferase
21	gi 20807926 ref NP_623097.1	1	12.7	phosphotransacetylase
22	gi 20808178 ref NP_623349.1	1	21.7	enolase
23	gi 20808180 ref NP_623351.1	1	11.9	phosphoglycerate kinase
24	gi 20808181 ref NP_623352.1	1	21.8	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
25	gi 20808521 ref NP_623692.1	1	5.1	NADH:flavin oxidoreductase
26	gi 20808582 ref NP_623753.1	1	3.9	glutamate dehydrogenase/leucine dehydrogenase
27	gi 20808662 ref NP_623833.1	1	9.5	elongation factor Tu
28	gi 20808676 ref NP_623847.1	1	9.5	elongation factor Tu
29	gi 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
30	gi 20808842 ref NP_624013.1	1	8.4	phosphoglycerate mutase 1
31	gi 20808928 ref NP_624099.1	1	8.3	molecular chaperone (small heat shock protein)
32	gi 20808954 ref NP_624125.1	1	4.5	CTP synthetase
33	gi 20809018 ref NP_624189.1	1	37.6	Co-chaperonin GroES (HSP10)
34	gi 20809051 ref NP_624222.1	1	12.6	dehydrogenase
35	gi 20808179 ref NP_623350.1	0.9993	10.9	triosephosphate isomerase

36	gj 20806574 ref NP_621745.1	0.9968	3.6	transglutaminase-like enzyme, putative cysteine protease
37	gj 20806616 ref NP_621787.1	0.9968	22.8	uncharacterized ACR involved in oxidation of intracellular sulfur
38	gj 20806617 ref NP_621788.1	0.9968	2.6	dihydropolipamide dehydrogenase/glutathione oxidoreductase and related enzyme
39	gj 20806666 ref NP_621837.1	0.9968	4.2	putative aldolase
40	gj 20806788 ref NP_621959.1	0.9968	4.3	threonine aldolase
41	gj 20806821 ref NP_621992.1	0.9968	8.8	hypothetical protein TTE0300
42	gj 20806827 ref NP_621998.1	0.9968	2.8	acetamidase/formamidase
43	gj 20806958 ref NP_622129.1	0.9968	3.5	urocanate hydratase
44	gj 20806992 ref NP_622163.1	0.9968	16.8	rubrerythrin
45	gj 20807075 ref NP_622246.1	0.9968	21.3	Co-chaperonin GroES (HSP10)
46	gj 20807176 ref NP_622347.1	0.9968	5	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
47	gj 20807314 ref NP_622485.1	0.9968	4.7	dihydrodipicolinate synthase
48	gj 20807446 ref NP_622617.1	0.9968	8.8	hypothetical protein TTE0965
49	gj 20807455 ref NP_622626.1	0.9968	6.9	deoxyribose-phosphate aldolase
50	gj 20807781 ref NP_622952.1	0.9968	5.1	spermidine synthase
51	gj 20807996 ref NP_623167.1	0.9968	3	hypothetical protein TTE1567
52	gj 20808247 ref NP_623418.1	0.9968	4.6	maltose-binding periplasmic protein
53	gj 20808352 ref NP_623523.1	0.9968	7.2	sugar phosphate isomerase/epimerase
54	gj 20808399 ref NP_623570.1	0.9968	7.1	dihydroxyacetone kinase
55	gj 20808432 ref NP_623603.1	0.9968	19	hypothetical protein TTE2030
56	gj 20808482 ref NP_623653.1	0.9968	2.5	hypothetical protein TTE2084
57	gj 20808519 ref NP_623690.1	0.9968	6.5	Zn-dependent dipeptidase
58	gj 20808597 ref NP_623768.1	0.9968	8.2	thioredoxin reductase
59	gj 20808607 ref NP_623778.1	0.9968	7.9	hydroxyethylthiazole kinase
60	gj 20808750 ref NP_623921.1	0.9968	18.8	lactoylglutathione lyase and related lyase
61	gj 20808768 ref NP_623939.1	0.9968	2.6	L-threonine 3-dehydrogenase
62	gj 20809048 ref NP_624219.1	0.9968	2.8	oligoendopeptidase F
63	gj 20808609 ref NP_623780.1	0.9964	5.1	3-ketoacyl-(acyl-carrier-protein) reductase
64	gj 20808484 ref NP_623655.1	0.9961	3.7	hypothetical protein TTE2086
65	gj 20808625 ref NP_623796.1	0.9935	9.2	ribosomal protein S9
66	gj 20808083 ref NP_623254.1	0.9929	2.6	Zn-dependent peptidase
67	gj 20809045 ref NP_624216.1	0.9926	1.8	uncharacterized NAD(FAD)-dependent dehydrogenase
68	gj 20807183 ref NP_622354.1	0.9871	4.4	alcohol dehydrogenase IV
69	gj 20808832 ref NP_624003.1	0.977	24.1	hypothetical protein TTE2477
70	gj 20809040 ref NP_624211.1	0.9711	3	adenylosuccinate synthetase
71	gj 20809066 ref NP_624237.1	0.9701	2.4	Zn-dependent protease
72	gj 20807293 ref NP_622464.1	0.9633	1.5	phosphoribosylformylglycinamide synthase II
73	gj 20807697 ref NP_622868.1	0.9517	1.4	alanyl-tRNA synthetase

4) Run 4

Number	Protein	Protein probability	Percent coverage	Description
1	gj 20806612 ref NP_621783.1	1	22.5	transcriptional regulator

2	gj 20806615 ref NP_621786.1	1	26.1	hypothetical protein TTE0086
3	gj 20806687 ref NP_621858.1	1	22.2	alanine dehydrogenase
4	gj 20806716 ref NP_621887.1	1	5.7	transketolase
5	gj 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
6	gj 20806814 ref NP_621985.1	1	8.7	glycine dehydrogenase subunit 2
7	gj 20806815 ref NP_621986.1	1	6.7	glycine dehydrogenase subunit 1
8	gj 20806821 ref NP_621992.1	1	10.9	hypothetical protein TTE0300
9	gj 20806958 ref NP_622129.1	1	8.2	urocanate hydratase
10	gj 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
11	gj 20807076 ref NP_622247.1	1	25.4	chaperonin GroEL
12	gj 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
13	gj 20807145 ref NP_622316.1	1	9	dehydrogenase and related proteins
14	gj 20807176 ref NP_622347.1	1	15.3	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
15	gj 20807218 ref NP_622389.1	1	9	phosphomannomutase
16	gj 20807314 ref NP_622485.1	1	8.8	dihydrodipicolinate synthase
17	gj 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
18	gj 20807441 ref NP_622612.1	1	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
19	gj 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
20	gj 20807461 ref NP_622632.1	1	23.7	pyruvate phosphate dikinase
21	gj 20807468 ref NP_622639.1	1	5.6	NADH:flavin oxidoreductase
22	gj 20807473 ref NP_622644.1	1	7.8	glycerophosphoryl diester phosphodiesterase
23	gj 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
24	gj 20807729 ref NP_622900.1	1	5.6	Xaa-Pro aminopeptidase
25	gj 20807815 ref NP_622986.1	1	9.1	aspartate aminotransferase
26	gj 20807926 ref NP_623097.1	1	28.4	phosphotransacetylase
27	gj 20808157 ref NP_623328.1	1	25.8	cold shock proteins
28	gj 20808178 ref NP_623349.1	1	23.5	enolase
29	gj 20808180 ref NP_623351.1	1	16.8	phosphoglycerate kinase
30	gj 20808181 ref NP_623352.1	1	25.1	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
31	gj 20808521 ref NP_623692.1	1	5.1	NADH:flavin oxidoreductase
32	gj 20808582 ref NP_623753.1	1	10.1	glutamate dehydrogenase/leucine dehydrogenase
33	gj 20808676 ref NP_623847.1	1	13.2	elongation factor Tu
34	gj 20808768 ref NP_623939.1	1	8.6	L-threonine 3-dehydrogenase
35	gj 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
36	gj 20808842 ref NP_624013.1	1	17.7	phosphoglycerate mutase 1
37	gj 20808928 ref NP_624099.1	1	23.4	molecular chaperone (small heat shock protein)
38	gj 20808954 ref NP_624125.1	1	7.1	CTP synthetase
39	gj 20809018 ref NP_624189.1	1	37.6	Co-chaperonin GroES (HSP10)
40	gj 20809045 ref NP_624216.1	1	6	uncharacterized NAD(FAD)-dependent dehydrogenase
41	gj 20809051 ref NP_624222.1	1	12.6	dehydrogenase
42	gj 20807781 ref NP_622952.1	0.9999	8.3	spermidine synthase
43	gj 20808179 ref NP_623350.1	0.9999	10.9	triosephosphate isomerase
44	gj 20808350 ref NP_623521.1	0.9999	9.6	glyoxylate reductase

45	gi 20808662 ref NP_623833.1	0.9999	13.2	elongation factor Tu
46	gi 20806574 ref NP_621745.1	0.9979	3.6	transglutaminase-like enzyme, putative cysteine protease
47	gi 20806617 ref NP_621788.1	0.9979	2.6	dihydropolipamide dehydrogenase/glutathione oxidoreductase and related enzyme
48	gi 20806666 ref NP_621837.1	0.9979	4.2	putative aldolase
49	gi 20806788 ref NP_621959.1	0.9979	4.3	threonine aldolase
50	gi 20806827 ref NP_621998.1	0.9979	2.8	acetamidase/formamidase
51	gi 20806992 ref NP_622163.1	0.9979	16.8	rubrerythrin
52	gi 20807075 ref NP_622246.1	0.9979	21.3	Co-chaperonin GroES (HSP10)
53	gi 20807144 ref NP_622315.1	0.9979	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
54	gi 20807175 ref NP_622346.1	0.9979	5.2	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
55	gi 20807446 ref NP_622617.1	0.9979	8.8	hypothetical protein TTE0965
56	gi 20807455 ref NP_622626.1	0.9979	6.9	deoxyribose-phosphate aldolase
57	gi 20807996 ref NP_623167.1	0.9979	3	hypothetical protein TTE1567
58	gi 20808019 ref NP_623190.1	0.9979	8.1	translation initiation factor eIF-2B alpha subunit
59	gi 20808171 ref NP_623342.1	0.9979	7.8	purine-nucleoside phosphorylase
60	gi 20808247 ref NP_623418.1	0.9979	4.6	maltose-binding periplasmic protein
61	gi 20808352 ref NP_623523.1	0.9979	7.2	sugar phosphate isomerase/epimerase
62	gi 20808399 ref NP_623570.1	0.9979	7.1	dihydroxyacetone kinase
63	gi 20808432 ref NP_623603.1	0.9979	19	hypothetical protein TTE2030
64	gi 20808482 ref NP_623653.1	0.9979	2.5	hypothetical protein TTE2084
65	gi 20808484 ref NP_623655.1	0.9979	3.7	hypothetical protein TTE2086
66	gi 20808519 ref NP_623690.1	0.9979	6.5	Zn-dependent dipeptidase
67	gi 20808520 ref NP_623691.1	0.9979	2.9	serine hydroxymethyltransferase
68	gi 20808597 ref NP_623768.1	0.9979	8.2	thioredoxin reductase
69	gi 20808607 ref NP_623778.1	0.9979	7.9	hydroxyethylthiazole kinase
70	gi 20808609 ref NP_623780.1	0.9979	5.1	3-ketoacyl-(acyl-carrier-protein) reductase
71	gi 20808749 ref NP_623920.1	0.9979	2.9	Acetyl-CoA carboxylase alpha subunit
72	gi 20808750 ref NP_623921.1	0.9979	18.8	lactoylglutathione lyase and related lyase
73	gi 20808755 ref NP_623926.1	0.9979	2.9	formyltetrahydrofolate synthetase
74	gi 20808886 ref NP_624057.1	0.9979	7.5	Zn-dependent hydrolase
75	gi 20809048 ref NP_624219.1	0.9979	2.8	oligoendopeptidase F
76	gi 20806675 ref NP_621846.1	0.9976	3.6	ribose 5-phosphate isomerase RpiB
77	gi 20808625 ref NP_623796.1	0.9964	9.2	ribosomal protein S9
78	gi 20808083 ref NP_623254.1	0.9961	2.6	Zn-dependent peptidase
79	gi 20807113 ref NP_622284.1	0.9951	4.2	RNase PH
80	gi 20806616 ref NP_621787.1	0.9949	22.8	uncharacterized ACR involved in oxidation of intracellular sulfur
81	gi 20807184 ref NP_622355.1	0.9898	2.8	ferredoxin 2
82	gi 20808832 ref NP_624003.1	0.9878	24.1	hypothetical protein TTE2477
83	gi 20806804 ref NP_621975.1	0.9845	9.2	DNA-binding protein
84	gi 20809040 ref NP_624211.1	0.9834	3	adenylosuccinate synthetase
85	gi 20809047 ref NP_624218.1	0.9824	2.3	phosphomannomutase
86	gi 20809066 ref NP_624237.1	0.9769	2.4	Zn-dependent protease
87	gi 20807293 ref NP_622464.1	0.9671	1.5	phosphoribosylformylglycinamide synthase II

88	gj 20808583 ref NP_623754.1	0.9667	3.4	glutamate dehydrogenase/leucine dehydrogenase
89	gj 20807596 ref NP_622767.1	0.9657	9.5	chemotaxis signal transduction protein
90	gj 20807697 ref NP_622868.1	0.9638	1.4	alanyl-tRNA synthetase
91	gj 20807183 ref NP_622354.1	0.9634	4.4	alcohol dehydrogenase IV

5)Run 5

Number	Protein	Protein probability	Percent Coverage	Description
1	gj 20806612 ref NP_621783.1	1	22.5	transcriptional regulator
2	gj 20806615 ref NP_621786.1	1	26.1	hypothetical protein TTE0086
3	gj 20806616 ref NP_621787.1	1	28.3	uncharacterized ACR involved in oxidation of intracellular sulfur
4	gj 20806687 ref NP_621858.1	1	22.2	alanine dehydrogenase
5	gj 20806716 ref NP_621887.1	1	5.7	transketolase
6	gj 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
7	gj 20806814 ref NP_621985.1	1	8.7	glycine dehydrogenase subunit 2
8	gj 20806815 ref NP_621986.1	1	6.7	glycine dehydrogenase subunit 1
9	gj 20806821 ref NP_621992.1	1	10.9	hypothetical protein TTE0300
10	gj 20806958 ref NP_622129.1	1	8.2	urocanate hydratase
11	gj 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
12	gj 20807076 ref NP_622247.1	1	25.4	chaperonin GroEL
13	gj 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
14	gj 20807145 ref NP_622316.1	1	9	dehydrogenase and related proteins
15	gj 20807176 ref NP_622347.1	1	12.1	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
16	gj 20807218 ref NP_622389.1	1	9	phosphomannomutase
17	gj 20807314 ref NP_622485.1	1	8.8	dihydrodipicolinate synthase
18	gj 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
19	gj 20807441 ref NP_622612.1	1	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
20	gj 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
21	gj 20807461 ref NP_622632.1	1	23.5	pyruvate phosphate dikinase
22	gj 20807468 ref NP_622639.1	1	5.6	NADH:flavin oxidoreductase
23	gj 20807473 ref NP_622644.1	1	7.8	glycerophosphoryl diester phosphodiesterase
24	gj 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
25	gj 20807729 ref NP_622900.1	1	5.6	Xaa-Pro aminopeptidase
26	gj 20807815 ref NP_622986.1	1	9.1	aspartate aminotransferase
27	gj 20807926 ref NP_623097.1	1	28.4	phosphotransacetylase
28	gj 20808157 ref NP_623328.1	1	25.8	cold shock proteins
29	gj 20808178 ref NP_623349.1	1	23.5	enolase
30	gj 20808180 ref NP_623351.1	1	16.8	phosphoglycerate kinase
31	gj 20808181 ref NP_623352.1	1	25.1	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
32	gj 20808350 ref NP_623521.1	1	9.6	glyoxylate reductase
33	gj 20808521 ref NP_623692.1	1	5.1	NADH:flavin oxidoreductase
34	gj 20808582 ref NP_623753.1	1	10.1	glutamate dehydrogenase/leucine dehydrogenase
35	gj 20808676 ref NP_623847.1	1	13.2	elongation factor Tu

36	gj 20808768 ref NP_623939.1	1	8.6	L-threonine 3-dehydrogenase
37	gj 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
38	gj 20808842 ref NP_624013.1	1	17.7	phosphoglycerate mutase 1
39	gj 20808928 ref NP_624099.1	1	23.4	molecular chaperone (small heat shock protein)
40	gj 20808954 ref NP_624125.1	1	7.1	CTP synthetase
41	gj 20809018 ref NP_624189.1	1	37.6	Co-chaperonin GroES (HSP10)
42	gj 20809045 ref NP_624216.1	1	6	uncharacterized NAD(FAD)-dependent dehydrogenase
43	gj 20809048 ref NP_624219.1	1	5.8	oligoendopeptidase F
44	gj 20809051 ref NP_624222.1	1	12.6	dehydrogenase
45	gj 20807781 ref NP_622952.1	0.9999	8.3	spermidine synthase
46	gj 20808662 ref NP_623833.1	0.9999	13.2	elongation factor Tu
47	gj 20808171 ref NP_623342.1	0.9998	7.8	purine-nucleoside phosphorylase
48	gj 20808179 ref NP_623350.1	0.9997	10.9	triosephosphate isomerase
49	gj 20806574 ref NP_621745.1	0.9973	3.6	transglutaminase-like enzyme, putative cysteine protease
50	gj 20806617 ref NP_621788.1	0.9973	2.6	dihydrolipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
51	gj 20806666 ref NP_621837.1	0.9973	4.2	putative aldolase
52	gj 20806788 ref NP_621959.1	0.9973	4.3	threonine aldolase
53	gj 20806827 ref NP_621998.1	0.9973	2.8	acetamidase/formamidase
54	gj 20806992 ref NP_622163.1	0.9973	16.8	rubrerythrin
55	gj 20807075 ref NP_622246.1	0.9973	21.3	Co-chaperonin GroES (HSP10)
56	gj 20807144 ref NP_622315.1	0.9973	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
57	gj 20807175 ref NP_622346.1	0.9973	5.2	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
58	gj 20807446 ref NP_622617.1	0.9973	8.8	hypothetical protein TTE0965
59	gj 20807455 ref NP_622626.1	0.9973	6.9	deoxyribose-phosphate aldolase
60	gj 20807996 ref NP_623167.1	0.9973	3	hypothetical protein TTE1567
61	gj 20808019 ref NP_623190.1	0.9973	8.1	translation initiation factor eIF-2B alpha subunit
62	gj 20808247 ref NP_623418.1	0.9973	4.6	maltose-binding periplasmic protein
63	gj 20808352 ref NP_623523.1	0.9973	7.2	sugar phosphate isomerase/epimerase
64	gj 20808399 ref NP_623570.1	0.9973	7.1	dihydroxyacetone kinase
65	gj 20808432 ref NP_623603.1	0.9973	19	hypothetical protein TTE2030
66	gj 20808482 ref NP_623653.1	0.9973	2.5	hypothetical protein TTE2084
67	gj 20808519 ref NP_623690.1	0.9973	6.5	Zn-dependent dipeptidase
68	gj 20808597 ref NP_623768.1	0.9973	8.2	thioredoxin reductase
69	gj 20808749 ref NP_623920.1	0.9973	2.9	Acetyl-CoA carboxylase alpha subunit
70	gj 20808750 ref NP_623921.1	0.9973	18.8	lactoylglutathione lyase and related lyase
71	gj 20808755 ref NP_623926.1	0.9973	2.9	formyltetrahydrofolate synthetase
72	gj 20808886 ref NP_624057.1	0.9973	7.5	Zn-dependent hydrolase
73	gj 20806675 ref NP_621846.1	0.9971	3.6	ribose 5-phosphate isomerase RpiB
74	gj 20808607 ref NP_623778.1	0.9971	7.9	hydroxyethylthiazole kinase
75	gj 20808965 ref NP_624136.1	0.9963	4.3	homoserine dehydrogenase
76	gj 20808484 ref NP_623655.1	0.9931	3.7	hypothetical protein TTE2086
77	gj 20808609 ref NP_623780.1	0.991	5.1	3-ketoacyl-(acyl-carrier-protein) reductase
78	gj 20807466 ref NP_622637.1	0.9897	8.9	putative intracellular protease/amidase

79	gi 20808520 ref NP_623691.1	0.9892	2.9	serine hydroxymethyltransferase
80	gi 20807697 ref NP_622868.1	0.9855	1.4	alanyl-tRNA synthetase
81	gi 20808832 ref NP_624003.1	0.9842	24.1	hypothetical protein TTE2477
82	gi 20806804 ref NP_621975.1	0.984	9.2	DNA-binding protein
83	gi 20809040 ref NP_624211.1	0.9829	3	adenylosuccinate synthetase
84	gi 20808222 ref NP_623393.1	0.9772	1.9	glucan phosphorylase
85	gi 20808083 ref NP_623254.1	0.977	2.6	Zn-dependent peptidase
86	gi 20807113 ref NP_622284.1	0.9765	4.2	RNase PH
87	gi 20809066 ref NP_624237.1	0.9754	2.4	Zn-dependent protease
88	gi 20807183 ref NP_622354.1	0.9678	4.4	alcohol dehydrogenase IV
89	gi 20807293 ref NP_622464.1	0.9514	1.5	phosphoribosylformylglycinamide synthase II

6)Run 6

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806615 ref NP_621786.1	1	33.6	hypothetical protein TTE0086
2	gi 20806687 ref NP_621858.1	1	10.2	alanine dehydrogenase
3	gi 20806716 ref NP_621887.1	1	4	transketolase
4	gi 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
5	gi 20806814 ref NP_621985.1	1	9.1	glycine dehydrogenase subunit 2
6	gi 20806815 ref NP_621986.1	1	6.7	glycine dehydrogenase subunit 1
7	gi 20806827 ref NP_621998.1	1	11.7	acetamidase/formamidase
8	gi 20806958 ref NP_622129.1	1	6	urocanate hydratase
9	gi 20806992 ref NP_622163.1	1	17.3	rubrerythrin
10	gi 20807076 ref NP_622247.1	1	18.9	chaperonin GroEL
11	gi 20807218 ref NP_622389.1	1	6.2	phosphomannomutase
12	gi 20807261 ref NP_622432.1	1	8	hypothetical protein TTE0779
13	gi 20807461 ref NP_622632.1	1	16.9	pyruvate phosphate dikinase
14	gi 20807468 ref NP_622639.1	1	4.1	NADH:flavin oxidoreductase
15	gi 20807480 ref NP_622651.1	1	6.9	uncharacterized flavoproteins
16	gi 20807729 ref NP_622900.1	1	10.1	Xaa-Pro aminopeptidase
17	gi 20807815 ref NP_622986.1	1	5.8	aspartate aminotransferase
18	gi 20807926 ref NP_623097.1	1	24.2	phosphotransacetylase
19	gi 20808178 ref NP_623349.1	1	17.5	enolase
20	gi 20808179 ref NP_623350.1	1	10.9	triosephosphate isomerase
21	gi 20808180 ref NP_623351.1	1	5.8	phosphoglycerate kinase
22	gi 20808181 ref NP_623352.1	1	19.7	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
23	gi 20808769 ref NP_623940.1	1	13.7	7-keto-8-aminopelargonate synthetase and related enzyme
24	gi 20808842 ref NP_624013.1	1	8.4	phosphoglycerate mutase 1
25	gi 20808954 ref NP_624125.1	1	4.5	CTP synthetase
26	gi 20808970 ref NP_624141.1	1	4.5	NADH:flavin oxidoreductase
27	gi 20809018 ref NP_624189.1	1	37.6	Co-chaperonin GroES (HSP10)

28	gi 20809048 ref NP_624219.1	1	7.6	oligoendopeptidase F
29	gi 20807075 ref NP_622246.1	0.9999	30.9	Co-chaperonin GroES (HSP10)
30	gi 20808165 ref NP_623336.1	0.9999	6.2	dipeptidase PepV
31	gi 20808662 ref NP_623833.1	0.9998	13.2	elongation factor Tu
32	gi 20808676 ref NP_623847.1	0.9998	13.2	elongation factor Tu
33	gi 20806612 ref NP_621783.1	0.9981	22.5	transcriptional regulator
34	gi 20806617 ref NP_621788.1	0.9981	2.6	dihydroliipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
35	gi 20806788 ref NP_621959.1	0.9981	4.3	threonine aldolase
36	gi 20806821 ref NP_621992.1	0.9981	8.8	hypothetical protein TTE0300
37	gi 20806883 ref NP_622054.1	0.9981	5.7	ATP:corrinoid adenosyltransferase
38	gi 20806972 ref NP_622143.1	0.9981	3.2	thymidine phosphorylase
39	gi 20807103 ref NP_622274.1	0.9981	2.7	aspartyl/glutamyl-tRNA amidotransferase subunit B
40	gi 20807145 ref NP_622316.1	0.9981	5.7	dehydrogenase and related proteins
41	gi 20807175 ref NP_622346.1	0.9981	5.2	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
42	gi 20807176 ref NP_622347.1	0.9981	5	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
43	gi 20807293 ref NP_622464.1	0.9981	1.5	phosphoribosylformylglycinamide synthase II
44	gi 20807303 ref NP_622474.1	0.9981	1.4	glutamine synthase
45	gi 20807314 ref NP_622485.1	0.9981	4.7	dihydrodipicolinate synthase
46	gi 20807440 ref NP_622611.1	0.9981	12.7	Ferritin-like protein
47	gi 20807441 ref NP_622612.1	0.9981	4.6	2-oxoglutarate ferredoxin oxidoreductase subunit beta
48	gi 20807446 ref NP_622617.1	0.9981	8.8	hypothetical protein TTE0965
49	gi 20807455 ref NP_622626.1	0.9981	6.9	deoxyribose-phosphate aldolase
50	gi 20807473 ref NP_622644.1	0.9981	7.8	glycerophosphoryl diester phosphodiesterase
51	gi 20807808 ref NP_622979.1	0.9981	6.1	pyrroline-5-carboxylate reductase
52	gi 20807917 ref NP_623088.1	0.9981	4.2	3-oxoacyl-(acyl-carrier-protein) synthase
53	gi 20808083 ref NP_623254.1	0.9981	2.6	Zn-dependent peptidase
54	gi 20808106 ref NP_623277.1	0.9981	4.7	putative aminopeptidase 1
55	gi 20808157 ref NP_623328.1	0.9981	25.8	cold shock proteins
56	gi 20808170 ref NP_623341.1	0.9981	3.1	phosphomannose isomerase
57	gi 20808197 ref NP_623368.1	0.9981	2.7	uridine kinase
58	gi 20808247 ref NP_623418.1	0.9981	4.6	maltose-binding periplasmic protein
59	gi 20808293 ref NP_623464.1	0.9981	3.6	uncharacterized NAD(FAD)-dependent dehydrogenase
60	gi 20808350 ref NP_623521.1	0.9981	3.4	glyoxylate reductase
61	gi 20808432 ref NP_623603.1	0.9981	19	hypothetical protein TTE2030
62	gi 20808452 ref NP_623623.1	0.9981	9.2	single-stranded DNA-binding protein
63	gi 20808482 ref NP_623653.1	0.9981	2.5	hypothetical protein TTE2084
64	gi 20808484 ref NP_623655.1	0.9981	3.7	hypothetical protein TTE2086
65	gi 20808597 ref NP_623768.1	0.9981	8.2	thioredoxin reductase
66	gi 20808609 ref NP_623780.1	0.9981	5.1	3-ketoacyl-(acyl-carrier-protein) reductase
67	gi 20808681 ref NP_623852.1	0.9981	2.6	cysteinyl-tRNA synthetase

68	gi 20808701 ref NP_623872.1	0.9981	1.3	diguanylate cyclase/phosphodiesterase
69	gi 20808832 ref NP_624003.1	0.9981	24.1	hypothetical protein TTE2477
70	gi 20808886 ref NP_624057.1	0.9981	7.5	Zn-dependent hydrolase
71	gi 20809045 ref NP_624216.1	0.9981	4.2	uncharacterized NAD(FAD)-dependent dehydrogenase
72	gi 20806616 ref NP_621787.1	0.9979	22.8	uncharacterized ACR involved in oxidation of intracellular sulfur
73	gi 20806659 ref NP_621830.1	0.9979	6.4	Ni ²⁺ -binding GTPase involved in regulation of expression and maturation of urease and hydrogenase
74	gi 20806736 ref NP_621907.1	0.9977	1.6	diaminopimelate decarboxylase
75	gi 20808928 ref NP_624099.1	0.9942	15.2	molecular chaperone (small heat shock protein)
76	gi 20806666 ref NP_621837.1	0.9932	3.2	putative aldolase
77	gi 20807466 ref NP_622637.1	0.9913	6	putative intracellular protease/amidase
78	gi 20807912 ref NP_623083.1	0.9911	1.3	chromosome segregation ATPase
79	gi 20806793 ref NP_621964.1	0.9859	24.1	hypothetical protein TTE0272
80	gi 20808397 ref NP_623568.1	0.9808	1.8	hypothetical protein TTE1994
81	gi 20806580 ref NP_621751.1	0.9565	5.6	HD-GYP domain-containing protein
82	gi 20808640 ref NP_623811.1	0.9561	5	adenylate kinase
83	gi 20808399 ref NP_623570.1	0.9554	7.1	dihydroxyacetone kinase

Table -SI-2 the identified proteins list using segment HPLC-MS² method

1)Run1

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806612 ref NP_621783.1	1	30	transcriptional regulator
2	gi 20806615 ref NP_621786.1	1	33.6	hypothetical protein TTE0086
3	gi 20806616 ref NP_621787.1	1	48.9	uncharacterized ACR involved in oxidation of intracellular sulfur
4	gi 20806617 ref NP_621788.1	1	12.1	dihydrolipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
5	gi 20806675 ref NP_621846.1	1	3.6	ribose 5-phosphate isomerase RpiB
6	gi 20806687 ref NP_621858.1	1	24.9	alanine dehydrogenase
7	gi 20806716 ref NP_621887.1	1	5.5	transketolase
8	gi 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
9	gi 20806814 ref NP_621985.1	1	10.7	glycine dehydrogenase subunit 2
10	gi 20806815 ref NP_621986.1	1	8.2	glycine dehydrogenase subunit 1
11	gi 20806821 ref NP_621992.1	1	10.9	hypothetical protein TTE0300
12	gi 20806827 ref NP_621998.1	1	11.7	acetamidase/formamidase
13	gi 20806954 ref NP_622125.1	1	3.2	pyruvate:ferredoxin oxidoreductase and related 2-oxoacid:ferredoxin oxidoreductase, alpha subunit
14	gi 20806958 ref NP_622129.1	1	12.9	urocanate hydratase
15	gi 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
16	gi 20806992 ref NP_622163.1	1	25.4	rubrerythrin
17	gi 20806993 ref NP_622164.1	1	6.1	S-adenosylmethionine synthetase
18	gi 20807075 ref NP_622246.1	1	46.8	Co-chaperonin GroES (HSP10)
19	gi 20807076 ref NP_622247.1	1	36.9	chaperonin GroEL
20	gi 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
21	gi 20807145 ref NP_622316.1	1	9.3	dehydrogenase and related proteins
22	gi 20807175 ref NP_622346.1	1	11.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
23	gi 20807176 ref NP_622347.1	1	18.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
24	gi 20807218 ref NP_622389.1	1	11.4	phosphomannomutase
25	gi 20807261 ref NP_622432.1	1	8	hypothetical protein TTE0779
26	gi 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
27	gi 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
28	gi 20807446 ref NP_622617.1	1	16.9	hypothetical protein TTE0965
29	gi 20807455 ref NP_622626.1	1	13.9	deoxyribose-phosphate aldolase
30	gi 20807461 ref NP_622632.1	1	28	pyruvate phosphate dikinase
31	gi 20807468 ref NP_622639.1	1	13.4	NADH:flavin oxidoreductase
32	gi 20807473 ref NP_622644.1	1	9.1	glycerophosphoryl diester phosphodiesterase

33	gi 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
34	gi 20807729 ref NP_622900.1	1	14.1	Xaa-Pro aminopeptidase
35	gi 20807781 ref NP_622952.1	1	10.8	spermidine synthase
36	gi 20807815 ref NP_622986.1	1	22	aspartate aminotransferase
37	gi 20807926 ref NP_623097.1	1	32	phosphotransacetylase
38	gi 20808165 ref NP_623336.1	1	8.6	dipeptidase PepV
39	gi 20808171 ref NP_623342.1	1	7.8	purine-nucleoside phosphorylase
40	gi 20808178 ref NP_623349.1	1	29.1	enolase
41	gi 20808179 ref NP_623350.1	1	10.9	triosephosphate isomerase
42	gi 20808180 ref NP_623351.1	1	16.2	phosphoglycerate kinase
43	gi 20808181 ref NP_623352.1	1	34.6	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
44	gi 20808222 ref NP_623393.1	1	7	glucan phosphorylase
45	gi 20808350 ref NP_623521.1	1	17.6	glyoxylate reductase
46	gi 20808352 ref NP_623523.1	1	14.8	sugar phosphate isomerase/epimerase
47	gi 20808520 ref NP_623691.1	1	12.3	serine hydroxymethyltransferase
48	gi 20808521 ref NP_623692.1	1	3.4	NADH:flavin oxidoreductase
49	gi 20808582 ref NP_623753.1	1	22.3	glutamate dehydrogenase/leucine dehydrogenase
50	gi 20808583 ref NP_623754.1	1	9.6	glutamate dehydrogenase/leucine dehydrogenase
51	gi 20808676 ref NP_623847.1	1	17.8	elongation factor Tu
52	gi 20808681 ref NP_623852.1	1	5.4	cysteinyI-tRNA synthetase
53	gi 20808755 ref NP_623926.1	1	7.6	formyltetrahydrofolate synthetase
54	gi 20808768 ref NP_623939.1	1	14.9	L-threonine 3-dehydrogenase
55	gi 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
56	gi 20808842 ref NP_624013.1	1	17.3	phosphoglycerate mutase 1
57	gi 20808928 ref NP_624099.1	1	23.4	molecular chaperone (small heat shock protein)
58	gi 20808954 ref NP_624125.1	1	7.1	CTP synthetase
59	gi 20808970 ref NP_624141.1	1	6.2	NADH:flavin oxidoreductase
60	gi 20809018 ref NP_624189.1	1	29	Co-chaperonin GroES (HSP10)
61	gi 20809040 ref NP_624211.1	1	9.8	adenylosuccinate synthetase
62	gi 20809045 ref NP_624216.1	1	8.4	uncharacterized NAD(FAD)-dependent dehydrogenase
63	gi 20809048 ref NP_624219.1	1	7.6	oligoendopeptidase F
64	gi 20809051 ref NP_624222.1	1	16.4	dehydrogenase
65	gi 20807255 ref NP_622426.1	1	11.4	phosphomannomutase
66	gi 20808876 ref NP_624047.1	1	17.3	phosphoglycerate mutase 1
67	gi 20807698 ref NP_622869.1	0.9999	23.9	hypothetical protein TTE1249
68	gi 20808157 ref NP_623328.1	0.9999	25.8	cold shock proteins
69	gi 20808484 ref NP_623655.1	0.9999	7.8	hypothetical protein TTE2086
70	gi 20808609 ref NP_623780.1	0.9999	9.8	3-ketoacyl-(acyl-carrier-protein) reductase
71	gi 20807047 ref NP_622218.1	0.9998	11.5	electron transfer flavoprotein subunit beta
72	gi 20807293 ref NP_622464.1	0.9998	3.4	phosphoribosylformylglycinamide synthase II
73	gi 20807441 ref NP_622612.1	0.9998	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
74	gi 20808367 ref NP_623538.1	0.9997	13.4	putative hydrolase

75	gi 20808399 ref NP_623570.1	0.9989	11.8	dihydroxyacetone kinase
76	gi 20808662 ref NP_623833.1	0.9989	17.8	elongation factor Tu
77	gi 20807095 ref NP_622266.1	0.997	13.9	phosphotransferase system cellobiose-specific component IIB
78	gi 20806574 ref NP_621745.1	0.9965	3.6	transglutaminase-like enzyme, putative cysteine protease
79	gi 20806666 ref NP_621837.1	0.9965	4.2	putative aldolase
80	gi 20806763 ref NP_621934.1	0.9965	17.3	hypothetical protein TTE0242
81	gi 20806788 ref NP_621959.1	0.9965	4.3	threonine aldolase
82	gi 20806822 ref NP_621993.1	0.9965	5.7	PLP-dependent aminotransferase
83	gi 20806830 ref NP_622001.1	0.9965	3.1	oxidoreductase
84	gi 20807045 ref NP_622216.1	0.9965	9.6	3-hydroxybutyryl-CoA dehydratase
85	gi 20807046 ref NP_622217.1	0.9965	3.4	Acyl-CoA dehydrogenase
86	gi 20807086 ref NP_622257.1	0.9965	6.8	phosphoribosylglycinamide formyltransferase
87	gi 20807113 ref NP_622284.1	0.9965	10.3	RNase PH
88	gi 20807119 ref NP_622290.1	0.9965	5.6	ATP-dependent Clp protease proteolytic subunit
89	gi 20807139 ref NP_622310.1	0.9965	5.3	methyl-accepting chemotaxis protein
90	gi 20807144 ref NP_622315.1	0.9965	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
91	gi 20807158 ref NP_622329.1	0.9965	3.8	cell wall biogenesis regulatory protein
92	gi 20807167 ref NP_622338.1 ,gi 20808040 ref NP_623211.1	0.9965	7.9	pyrrolidone-carboxylate peptidase ,pyrrolidone-carboxylate peptidase
93	gi 20807177 ref NP_622348.1	0.9965	4.3	dihydrolipoamide acyltransferase
94	gi 20807314 ref NP_622485.1	0.9965	4.7	dihydrodipicolinate synthase
95	gi 20807315 ref NP_622486.1	0.9965	4.3	aspartate-semialdehyde dehydrogenase
96	gi 20807596 ref NP_622767.1	0.9965	9.5	chemotaxis signal transduction protein
97	gi 20807700 ref NP_622871.1	0.9965	18.8	hypothetical protein TTE1251
98	gi 20807728 ref NP_622899.1	0.9965	10.1	3-dehydroquinate dehydratase
99	gi 20807808 ref NP_622979.1	0.9965	6.1	pyrroline-5-carboxylate reductase
100	gi 20807922 ref NP_623093.1	0.9965	5.7	3-oxoacyl-(acyl carrier protein) synthase III
101	gi 20808019 ref NP_623190.1	0.9965	8.1	translation initiation factor eIF-2B alpha subunit
102	gi 20808083 ref NP_623254.1	0.9965	2.6	Zn-dependent peptidase
103	gi 20808138 ref NP_623309.1	0.9965	2.3	threonyl-tRNA synthetase
104	gi 20808197 ref NP_623368.1	0.9965	2.7	uridine kinase
105	gi 20808247 ref NP_623418.1	0.9965	4.6	maltose-binding periplasmic protein
106	gi 20808432 ref NP_623603.1	0.9965	19	hypothetical protein TTE2030
107	gi 20808474 ref NP_623645.1	0.9965	3	septum formation inhibitor-activating ATPase
108	gi 20808482 ref NP_623653.1	0.9965	2.5	hypothetical protein TTE2084
109	gi 20808519 ref NP_623690.1	0.9965	6.5	Zn-dependent dipeptidase
110	gi 20808597 ref NP_623768.1	0.9965	8.2	thioredoxin reductase
111	gi 20808607 ref NP_623778.1	0.9965	8.2	hydroxyethylthiazole kinase
112	gi 20808750 ref NP_623921.1	0.9965	18.8	lactoylglutathione lyase and related lyase
113	gi 20808835 ref NP_624006.1	0.9965	14.5	major membrane immunogen precursor
114	gi 20808886 ref NP_624057.1	0.9965	7.5	Zn-dependent hydrolase
115	gi 20808452 ref NP_623623.1	0.9961	9.2	single-stranded DNA-binding protein
116	gi 20808625 ref NP_623796.1	0.9961	9.2	ribosomal protein S9

117	gi 20808640 ref NP_623811.1	0.996	9.2	ribosomal protein S9
118	gi 20807048 ref NP_622219.1	0.9954	5.1	electron transfer flavoprotein subunit alpha
119	gi 20808610 ref NP_623781.1	0.9954	4.6	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
120	gi 20807067 ref NP_622238.1	0.9916	6.2	NADPH-dependent glutamate synthase beta chain and related oxidoreductase
121	gi 20808832 ref NP_624003.1	0.9912	24.1	hypothetical protein TTE2477
122	gi 20806566 ref NP_621737.1	0.9871	3.3	seryl-tRNA synthetase
123	gi 20807697 ref NP_622868.1	0.9792	1.4	alanyl-tRNA synthetase
124	gi 20806793 ref NP_621964.1	0.9775	24.1	hypothetical protein TTE0272
125	gi 20807303 ref NP_622474.1	0.9761	1.4	glutamine synthase
126	gi 20808737 ref NP_623908.1	0.9754	6.4	transcription elongation factor GreA
127	gi 20809066 ref NP_624237.1	0.972	2.4	Zn-dependent protease
128	gi 20806659 ref NP_621830.1	0.9687	6.4	Ni ²⁺ -binding GTPase involved in regulation of expression and maturation of urease and hydrogenase
129	gi 20808923 ref NP_624094.1	0.9676	5.8	purine operon repressor
130	gi 20808233 ref NP_623404.1	0.9643	2.8	6-phosphofructokinase
131	gi 20807917 ref NP_623088.1	0.9626	4.2	3-oxoacyl-(acyl-carrier-protein) synthase
132	gi 20808293 ref NP_623464.1	0.959	2.2	uncharacterized NAD(FAD)-dependent dehydrogenase
133	gi 20807128 ref NP_622299.1	0.9586	2.4	F0F1 ATP synthase subunit alpha
134	gi 20806645 ref NP_621816.1	0.953	2.9	S-layer-like domain-containing protein

2)Run 2

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806612 ref NP_621783.1	1	30	transcriptional regulator
2	gi 20806615 ref NP_621786.1	1	33.6	hypothetical protein TTE0086
3	gi 20806616 ref NP_621787.1	1	48.9	uncharacterized ACR involved in oxidation of intracellular sulfur
4	gi 20806617 ref NP_621788.1	1	12.1	dihydroipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
5	gi 20806675 ref NP_621846.1	1	3.6	ribose 5-phosphate isomerase RpiB
6	gi 20806687 ref NP_621858.1	1	24.9	alanine dehydrogenase
7	gi 20806716 ref NP_621887.1	1	5.5	transketolase
8	gi 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
9	gi 20806814 ref NP_621985.1	1	10.7	glycine dehydrogenase subunit 2
10	gi 20806815 ref NP_621986.1	1	8.2	glycine dehydrogenase subunit 1
11	gi 20806821 ref NP_621992.1	1	10.9	hypothetical protein TTE0300
12	gi 20806827 ref NP_621998.1	1	11.7	acetamidase/formamidase
13	gi 20806954 ref NP_622125.1	1	3.2	pyruvate:ferredoxin oxidoreductase and related 2-oxoacid:ferredoxin oxidoreductase, alpha subunit
14	gi 20806958 ref NP_622129.1	1	12.9	urocanate hydratase
15	gi 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
16	gi 20806992 ref NP_622163.1	1	25.4	rubrerythrin
17	gi 20806993 ref NP_622164.1	1	6.1	S-adenosylmethionine synthetase

18	gi 20807075 ref NP_622246.1	1	46.8	Co-chaperonin GroES (HSP10)
19	gi 20807076 ref NP_622247.1	1	36.9	chaperonin GroEL
20	gi 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
21	gi 20807145 ref NP_622316.1	1	9.3	dehydrogenase and related proteins
22	gi 20807175 ref NP_622346.1	1	11.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
23	gi 20807176 ref NP_622347.1	1	18.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
24	gi 20807218 ref NP_622389.1	1	11.4	phosphomannomutase
25	gi 20807261 ref NP_622432.1	1	8	hypothetical protein TTE0779
26	gi 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
27	gi 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
28	gi 20807446 ref NP_622617.1	1	16.9	hypothetical protein TTE0965
29	gi 20807455 ref NP_622626.1	1	13.9	deoxyribose-phosphate aldolase
30	gi 20807461 ref NP_622632.1	1	28	pyruvate phosphate dikinase
31	gi 20807468 ref NP_622639.1	1	13.4	NADH:flavin oxidoreductase
32	gi 20807473 ref NP_622644.1	1	9.1	glycerophosphoryl diester phosphodiesterase
33	gi 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
34	gi 20807729 ref NP_622900.1	1	14.1	Xaa-Pro aminopeptidase
35	gi 20807781 ref NP_622952.1	1	10.8	spermidine synthase
36	gi 20807815 ref NP_622986.1	1	22	aspartate aminotransferase
37	gi 20807926 ref NP_623097.1	1	32	phosphotransacetylase
38	gi 20808165 ref NP_623336.1	1	8.6	dipeptidase PepV
39	gi 20808171 ref NP_623342.1	1	7.8	purine-nucleoside phosphorylase
40	gi 20808178 ref NP_623349.1	1	29.1	enolase
41	gi 20808179 ref NP_623350.1	1	10.9	triosephosphate isomerase
42	gi 20808180 ref NP_623351.1	1	16.2	phosphoglycerate kinase
43	gi 20808181 ref NP_623352.1	1	34.6	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate dehydrogenase
44	gi 20808222 ref NP_623393.1	1	7	glucan phosphorylase
45	gi 20808350 ref NP_623521.1	1	17.6	glyoxylate reductase
46	gi 20808352 ref NP_623523.1	1	14.8	sugar phosphate isomerase/epimerase
47	gi 20808520 ref NP_623691.1	1	12.3	serine hydroxymethyltransferase
48	gi 20808521 ref NP_623692.1	1	3.4	NADH:flavin oxidoreductase
49	gi 20808582 ref NP_623753.1	1	22.3	glutamate dehydrogenase/leucine dehydrogenase
50	gi 20808583 ref NP_623754.1	1	9.6	glutamate dehydrogenase/leucine dehydrogenase
51	gi 20808676 ref NP_623847.1	1	17.8	elongation factor Tu
52	gi 20808681 ref NP_623852.1	1	5.4	cysteinyl-tRNA synthetase
53	gi 20808755 ref NP_623926.1	1	7.6	formyltetrahydrofolate synthetase
54	gi 20808768 ref NP_623939.1	1	14.9	L-threonine 3-dehydrogenase
55	gi 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
56	gi 20808842 ref NP_624013.1	1	17.3	phosphoglycerate mutase 1

57	gi 20808928 ref NP_624099.1	1	23.4	molecular chaperone (small heat shock protein)
58	gi 20808954 ref NP_624125.1	1	7.1	CTP synthetase
59	gi 20808970 ref NP_624141.1	1	6.2	NADH:flavin oxidoreductase
60	gi 20809018 ref NP_624189.1	1	29	Co-chaperonin GroES (HSP10)
61	gi 20809040 ref NP_624211.1	1	9.8	adenylosuccinate synthetase
62	gi 20809045 ref NP_624216.1	1	8.4	uncharacterized NAD(FAD)-dependent dehydrogenase
63	gi 20809048 ref NP_624219.1	1	7.6	oligoendopeptidase F
64	gi 20809051 ref NP_624222.1	1	16.4	dehydrogenase
65	gi 20807698 ref NP_622869.1	0.9999	23.9	hypothetical protein TTE1249
66	gi 20808157 ref NP_623328.1	0.9999	25.8	cold shock proteins
67	gi 20808484 ref NP_623655.1	0.9999	7.8	hypothetical protein TTE2086
68	gi 20808609 ref NP_623780.1	0.9999	9.8	3-ketoacyl-(acyl-carrier-protein) reductase
69	gi 20807047 ref NP_622218.1	0.9998	11.5	electron transfer flavoprotein subunit beta
70	gi 20807293 ref NP_622464.1	0.9998	3.4	phosphoribosylformylglycinamide synthase II
71	gi 20807441 ref NP_622612.1	0.9998	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
72	gi 20808367 ref NP_623538.1	0.9997	13.4	putative hydrolase
73	gi 20808399 ref NP_623570.1	0.9989	11.8	dihydroxyacetone kinase
74	gi 20808662 ref NP_623833.1	0.9989	17.8	elongation factor Tu
75	gi 20807095 ref NP_622266.1	0.997	13.9	phosphotransferase system cellobiose-specific component IIB
76	gi 20806574 ref NP_621745.1	0.9965	3.6	transglutaminase-like enzyme, putative cysteine protease
77	gi 20806666 ref NP_621837.1	0.9965	4.2	putative aldolase
78	gi 20806763 ref NP_621934.1	0.9965	17.3	hypothetical protein TTE0242
79	gi 20806788 ref NP_621959.1	0.9965	4.3	threonine aldolase
80	gi 20806822 ref NP_621993.1	0.9965	5.7	PLP-dependent aminotransferase
81	gi 20806830 ref NP_622001.1	0.9965	3.1	oxidoreductase
82	gi 20807045 ref NP_622216.1	0.9965	9.6	3-hydroxybutyryl-CoA dehydratase
83	gi 20807046 ref NP_622217.1	0.9965	3.4	Acyl-CoA dehydrogenase
84	gi 20807086 ref NP_622257.1	0.9965	6.8	phosphoribosylglycinamide formyltransferase
85	gi 20807113 ref NP_622284.1	0.9965	10.3	RNase PH
86	gi 20807119 ref NP_622290.1	0.9965	5.6	ATP-dependent Clp protease proteolytic subunit
87	gi 20807139 ref NP_622310.1	0.9965	5.3	methyl-accepting chemotaxis protein
88	gi 20807144 ref NP_622315.1	0.9965	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
89	gi 20807158 ref NP_622329.1	0.9965	3.8	cell wall biogenesis regulatory protein
90	gi 20807167 ref NP_622338.1 ,gi 20808040 ref NP_623211.1	0.9965	7.9	pyrrolidone-carboxylate peptidase ,pyrrolidone-carboxylate peptidase
91	gi 20807177 ref NP_622348.1	0.9965	4.3	dihydrolipoamide acyltransferase
92	gi 20807314 ref NP_622485.1	0.9965	4.7	dihydrodipicolinate synthase
93	gi 20807315 ref NP_622486.1	0.9965	4.3	aspartate-semialdehyde dehydrogenase
94	gi 20807596 ref NP_622767.1	0.9965	9.5	chemotaxis signal transduction protein
95	gi 20807700 ref NP_622871.1	0.9965	18.8	hypothetical protein TTE1251
96	gi 20807728 ref NP_622899.1	0.9965	10.1	3-dehydroquininate dehydratase
97	gi 20807808 ref NP_622979.1	0.9965	6.1	pyrroline-5-carboxylate reductase
98	gi 20807922 ref NP_623093.1	0.9965	5.7	3-oxoacyl-(acyl carrier protein) synthase III

99	gi 20808019 ref NP_623190.1	0.9965	8.1	translation initiation factor eIF-2B alpha subunit
100	gi 20808083 ref NP_623254.1	0.9965	2.6	Zn-dependent peptidase
101	gi 20808138 ref NP_623309.1	0.9965	2.3	threonyl-tRNA synthetase
102	gi 20808197 ref NP_623368.1	0.9965	2.7	uridine kinase
103	gi 20808247 ref NP_623418.1	0.9965	4.6	maltose-binding periplasmic protein
104	gi 20808432 ref NP_623603.1	0.9965	19	hypothetical protein TTE2030
105	gi 20808474 ref NP_623645.1	0.9965	3	septum formation inhibitor-activating ATPase
106	gi 20808482 ref NP_623653.1	0.9965	2.5	hypothetical protein TTE2084
107	gi 20808519 ref NP_623690.1	0.9965	6.5	Zn-dependent dipeptidase
108	gi 20808597 ref NP_623768.1	0.9965	8.2	thioredoxin reductase
109	gi 20808607 ref NP_623778.1	0.9965	8.2	hydroxyethylthiazole kinase
110	gi 20808750 ref NP_623921.1	0.9965	18.8	lactoylglutathione lyase and related lyase
111	gi 20808835 ref NP_624006.1	0.9965	14.5	major membrane immunogen precursor
112	gi 20808886 ref NP_624057.1	0.9965	7.5	Zn-dependent hydrolase
113	gi 20808452 ref NP_623623.1	0.9961	9.2	single-stranded DNA-binding protein
114	gi 20808625 ref NP_623796.1	0.9961	9.2	ribosomal protein S9
115	gi 20807048 ref NP_622219.1	0.9954	5.1	electron transfer flavoprotein subunit alpha
116	gi 20808610 ref NP_623781.1	0.9954	4.6	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
117	gi 20807067 ref NP_622238.1	0.9916	6.2	NADPH-dependent glutamate synthase beta chain and related oxidoreductase
118	gi 20808832 ref NP_624003.1	0.9912	24.1	hypothetical protein TTE2477
119	gi 20806566 ref NP_621737.1	0.9871	3.3	seryl-tRNA synthetase
120	gi 20807697 ref NP_622868.1	0.9792	1.4	alanyl-tRNA synthetase
121	gi 20806793 ref NP_621964.1	0.9775	24.1	hypothetical protein TTE0272
122	gi 20807303 ref NP_622474.1	0.9761	1.4	glutamine synthase
123	gi 20808737 ref NP_623908.1	0.9754	6.4	transcription elongation factor GreA
124	gi 20809066 ref NP_624237.1	0.972	2.4	Zn-dependent protease
125	gi 20806659 ref NP_621830.1	0.9687	6.4	Ni ²⁺ -binding GTPase involved in regulation of expression and maturation of urease and hydrogenase
126	gi 20808923 ref NP_624094.1	0.9676	5.8	purine operon repressor
127	gi 20808233 ref NP_623404.1	0.9643	2.8	6-phosphofructokinase
128	gi 20807917 ref NP_623088.1	0.9626	4.2	3-oxoacyl-(acyl-carrier-protein) synthase
129	gi 20808293 ref NP_623464.1	0.959	2.2	uncharacterized NAD(FAD)-dependent dehydrogenase
130	gi 20807128 ref NP_622299.1	0.9586	2.4	F0F1 ATP synthase subunit alpha
131	gi 20806645 ref NP_621816.1	0.953	2.9	S-layer-like domain-containing protein

3)Run 3

Number	Protein	Protein probability	Percent coverage	Description
1	gi 20806612 ref NP_621783.1	1	30	transcriptional regulator
2	gi 20806615 ref NP_621786.1	1	33.6	hypothetical protein TTE0086
3	gi 20806791 ref NP_621962.1	1	8.2	putative peroxiredoxin
4	gi 20806616 ref NP_621787.1	1	48.9	uncharacterized ACR involved in oxidation of intracellular sulfur

5	gi 20806617 ref NP_621788.1	1	12.1	dihydropolipoamide dehydrogenase/glutathione oxidoreductase and related enzyme
6	gi 20806675 ref NP_621846.1	1	3.6	ribose 5-phosphate isomerase RpiB
7	gi 20806687 ref NP_621858.1	1	24.9	alanine dehydrogenase
8	gi 20806716 ref NP_621887.1	1	5.5	transketolase
9	gi 20806814 ref NP_621985.1	1	10.7	glycine dehydrogenase subunit 2
10	gi 20806815 ref NP_621986.1	1	8.2	glycine dehydrogenase subunit 1
11	gi 20806821 ref NP_621992.1	1	10.9	hypothetical protein TTE0300
12	gi 20806827 ref NP_621998.1	1	11.7	acetamidase/formamidase
13	gi 20806954 ref NP_622125.1	1	3.2	pyruvate:ferredoxin oxidoreductase and related 2-oxoacid:ferredoxin oxidoreductase, alpha subunit
14	gi 20806958 ref NP_622129.1	1	12.9	urocanate hydratase
15	gi 20806972 ref NP_622143.1	1	6	thymidine phosphorylase
16	gi 20806992 ref NP_622163.1	1	25.4	rubrerythrin
17	gi 20806993 ref NP_622164.1	1	6.1	S-adenosylmethionine synthetase
18	gi 20807075 ref NP_622246.1	1	46.8	Co-chaperonin GroES (HSP10)
19	gi 20807076 ref NP_622247.1	1	36.9	chaperonin GroEL
20	gi 20807103 ref NP_622274.1	1	5.5	aspartyl/glutamyl-tRNA amidotransferase subunit B
21	gi 20807145 ref NP_622316.1	1	9.3	dehydrogenase and related proteins
22	gi 20807175 ref NP_622346.1	1	11.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component alpha subunit
23	gi 20807218 ref NP_622389.1	1	11.4	phosphomannomutase
24	gi 20807261 ref NP_622432.1	1	8	hypothetical protein TTE0779
25	gi 20807440 ref NP_622611.1	1	24.9	Ferritin-like protein
26	gi 20807444 ref NP_622615.1	1	14.9	diadenosine tetraphosphate (Ap4A) hydrolase and other HIT family hydrolase
27	gi 20807446 ref NP_622617.1	1	16.9	hypothetical protein TTE0965
28	gi 20807455 ref NP_622626.1	1	13.9	deoxyribose-phosphate aldolase
29	gi 20807461 ref NP_622632.1	1	28	pyruvate phosphate dikinase
30	gi 20807468 ref NP_622639.1	1	13.4	NADH:flavin oxidoreductase
31	gi 20807473 ref NP_622644.1	1	9.1	glycerophosphoryl diester phosphodiesterase
32	gi 20807480 ref NP_622651.1	1	10.2	uncharacterized flavoproteins
33	gi 20807729 ref NP_622900.1	1	14.1	Xaa-Pro aminopeptidase
34	gi 20807781 ref NP_622952.1	1	10.8	spermidine synthase
35	gi 20807815 ref NP_622986.1	1	22	aspartate aminotransferase
36	gi 20807926 ref NP_623097.1	1	32	phosphotransacetylase
37	gi 20808876 ref NP_624047.1	1	17.3	phosphoglycerate mutase 1
38	gi 20808165 ref NP_623336.1	1	8.6	dipeptidase PepV
39	gi 20808171 ref NP_623342.1	1	7.8	purine-nucleoside phosphorylase
40	gi 20808178 ref NP_623349.1	1	29.1	enolase
41	gi 20808179 ref NP_623350.1	1	10.9	triosephosphate isomerase
42	gi 20808180 ref NP_623351.1	1	16.2	phosphoglycerate kinase
43	gi 20808181 ref NP_623352.1	1	34.6	glyceraldehyde-3-phosphate dehydrogenase/erythrose-4-phosphate

				dehydrogenase
44	gi 20808222 ref NP_623393.1	1	7	glucan phosphorylase
45	gi 20808350 ref NP_623521.1	1	17.6	glyoxylate reductase
46	gi 20808352 ref NP_623523.1	1	14.8	sugar phosphate isomerase/epimerase
47	gi 20808520 ref NP_623691.1	1	12.3	serine hydroxymethyltransferase
48	gi 20808521 ref NP_623692.1	1	3.4	NADH:flavin oxidoreductase
49	gi 20808582 ref NP_623753.1	1	22.3	glutamate dehydrogenase/leucine dehydrogenase
50	gi 20808583 ref NP_623754.1	1	9.6	glutamate dehydrogenase/leucine dehydrogenase
51	gi 20807176 ref NP_622347.1	1	18.6	thiamine pyrophosphate-dependent dehydrogenase, E1 component beta subunit
52	gi 20808676 ref NP_623847.1	1	17.8	elongation factor Tu
53	gi 20808681 ref NP_623852.1	1	5.4	cysteinyl-tRNA synthetase
54	gi 20808755 ref NP_623926.1	1	7.6	formyltetrahydrofolate synthetase
55	gi 20808768 ref NP_623939.1	1	14.9	L-threonine 3-dehydrogenase
56	gi 20808769 ref NP_623940.1	1	21.5	7-keto-8-aminopelargonate synthetase and related enzyme
57	gi 20808842 ref NP_624013.1	1	17.3	phosphoglycerate mutase 1
58	gi 20808928 ref NP_624099.1	1	23.4	molecular chaperone (small heat shock protein)
59	gi 20808954 ref NP_624125.1	1	7.1	CTP synthetase
60	gi 20808970 ref NP_624141.1	1	6.2	NADH:flavin oxidoreductase
61	gi 20809018 ref NP_624189.1	1	29	Co-chaperonin GroES (HSP10)
62	gi 20809040 ref NP_624211.1	1	9.8	adenylosuccinate synthetase
63	gi 20809045 ref NP_624216.1	1	8.4	uncharacterized NAD(FAD)-dependent dehydrogenase
64	gi 20809048 ref NP_624219.1	1	7.6	oligoendopeptidase F
65	gi 20809051 ref NP_624222.1	1	16.4	dehydrogenase
66	gi 20807698 ref NP_622869.1	0.9999	23.9	hypothetical protein TTE1249
67	gi 20808157 ref NP_623328.1	0.9999	25.8	cold shock proteins
68	gi 20808484 ref NP_623655.1	0.9999	7.8	hypothetical protein TTE2086
69	gi 20808609 ref NP_623780.1	0.9999	9.8	3-ketoacyl-(acyl-carrier-protein) reductase
70	gi 20807293 ref NP_622464.1	0.9998	3.4	phosphoribosylformylglycinamide synthase II
71	gi 20807047 ref NP_622218.1	0.9998	11.5	electron transfer flavoprotein subunit beta
72	gi 20807441 ref NP_622612.1	0.9998	8.5	2-oxoglutarate ferredoxin oxidoreductase subunit beta
73	gi 20808367 ref NP_623538.1	0.9997	13.4	putative hydrolase
74	gi 20808399 ref NP_623570.1	0.9989	11.8	dihydroxyacetone kinase
75	gi 20808662 ref NP_623833.1	0.9989	17.8	elongation factor Tu
76	gi 20807095 ref NP_622266.1	0.997	13.9	phosphotransferase system cellobiose-specific component IIB
77	gi 20806574 ref NP_621745.1	0.9965	3.6	transglutaminase-like enzyme, putative cysteine protease
78	gi 20806666 ref NP_621837.1	0.9965	4.2	putative aldolase
79	gi 20806763 ref NP_621934.1	0.9965	17.3	hypothetical protein TTE0242
80	gi 20806788 ref NP_621959.1	0.9965	4.3	threonine aldolase
81	gi 20806822 ref NP_621993.1	0.9965	5.7	PLP-dependent aminotransferase
82	gi 20806830 ref NP_622001.1	0.9965	3.1	oxidoreductase
83	gi 20807045 ref NP_622216.1	0.9965	9.6	3-hydroxybutyryl-CoA dehydratase
84	gi 20807046 ref NP_622217.1	0.9965	3.4	Acyl-CoA dehydrogenase

85	gi 20807086 ref NP_622257.1	0.9965	6.8	phosphoribosylglycinamide formyltransferase
86	gi 20807119 ref NP_622290.1	0.9965	5.6	ATP-dependent Clp protease proteolytic subunit
87	gi 20807139 ref NP_622310.1	0.9965	5.3	methyl-accepting chemotaxis protein
88	gi 20807144 ref NP_622315.1	0.9965	3.1	UDP-N-acetyl-D-mannosaminuronate dehydrogenase
89	gi 20807158 ref NP_622329.1	0.9965	3.8	cell wall biogenesis regulatory protein
90	gi 20807167 ref NP_622338.1 ,gi 20808040 ref NP_623211.1	0.9965	7.9	pyrrolidone-carboxylate peptidase ,pyrrolidone-carboxylate peptidase
91	gi 20807177 ref NP_622348.1	0.9965	4.3	dihydrolipoamide acyltransferase
92	gi 20807314 ref NP_622485.1	0.9965	4.7	dihydrodipicolinate synthase
93	gi 20807315 ref NP_622486.1	0.9965	4.3	aspartate-semialdehyde dehydrogenase
94	gi 20807596 ref NP_622767.1	0.9965	9.5	chemotaxis signal transduction protein
95	gi 20807113 ref NP_622284.1	0.9965	10.3	RNase PH
96	gi 20807700 ref NP_622871.1	0.9965	18.8	hypothetical protein TTE1251
97	gi 20807728 ref NP_622899.1	0.9965	10.1	3-dehydroquinone dehydratase
98	gi 20807808 ref NP_622979.1	0.9965	6.1	pyrroline-5-carboxylate reductase
99	gi 20807922 ref NP_623093.1	0.9965	5.7	3-oxoacyl-(acyl carrier protein) synthase III
100	gi 20808019 ref NP_623190.1	0.9965	8.1	translation initiation factor eIF-2B alpha subunit
101	gi 20808750 ref NP_623921.1	0.9965	18.8	lactoylglutathione lyase and related lyase
102	gi 20808083 ref NP_623254.1	0.9965	2.6	Zn-dependent peptidase
103	gi 20808138 ref NP_623309.1	0.9965	2.3	threonyl-tRNA synthetase
104	gi 20808197 ref NP_623368.1	0.9965	2.7	uridine kinase
105	gi 20808519 ref NP_623690.1	0.9965	6.5	Zn-dependent dipeptidase
106	gi 20808247 ref NP_623418.1	0.9965	4.6	maltose-binding periplasmic protein
107	gi 20808432 ref NP_623603.1	0.9965	19	hypothetical protein TTE2030
108	gi 20808474 ref NP_623645.1	0.9965	3	septum formation inhibitor-activating ATPase
109	gi 20808482 ref NP_623653.1	0.9965	2.5	hypothetical protein TTE2084
110	gi 20808597 ref NP_623768.1	0.9965	8.2	thioredoxin reductase
111	gi 20808607 ref NP_623778.1	0.9965	8.2	hydroxyethylthiazole kinase
112	gi 20808835 ref NP_624006.1	0.9965	14.5	major membrane immunogen precursor
113	gi 20808886 ref NP_624057.1	0.9965	7.5	Zn-dependent hydrolase
114	gi 20808452 ref NP_623623.1	0.9961	9.2	single-stranded DNA-binding protein
115	gi 20808640 ref NP_623811.1	0.996	9.2	ribosomal protein S9
116	gi 20808625 ref NP_623796.1	0.9961	9.2	ribosomal protein S9
117	gi 20807048 ref NP_622219.1	0.9954	5.1	electron transfer flavoprotein subunit alpha
118	gi 20808610 ref NP_623781.1	0.9954	4.6	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
119	gi 20807067 ref NP_622238.1	0.9916	6.2	NADPH-dependent glutamate synthase beta chain and related oxidoreductase
120	gi 20808832 ref NP_624003.1	0.9912	24.1	hypothetical protein TTE2477
121	gi 20806566 ref NP_621737.1	0.9871	3.3	seryl-tRNA synthetase
122	gi 20807697 ref NP_622868.1	0.9792	1.4	alanyl-tRNA synthetase
123	gi 20806793 ref NP_621964.1	0.9775	24.1	hypothetical protein TTE0272
124	gi 20807303 ref NP_622474.1	0.9761	1.4	glutamine synthase
125	gi 20808737 ref NP_623908.1	0.9754	6.4	transcription elongation factor GreA

126	gi 20809066 ref NP_624237.1	0.972	2.4	Zn-dependent protease
127	gi 20806659 ref NP_621830.1	0.9687	6.4	Ni ²⁺ -binding GTPase involved in regulation of expression and maturation of urease and hydrogenase
128	gi 20808923 ref NP_624094.1	0.9676	5.8	purine operon repressor
129	gi 20808233 ref NP_623404.1	0.9643	2.8	6-phosphofructokinase
130	gi 20807917 ref NP_623088.1	0.9626	4.2	3-oxoacyl-(acyl-carrier-protein) synthase
131	gi 20808293 ref NP_623464.1	0.959	2.2	uncharacterized NAD(FAD)-dependent dehydrogenase
132	gi 20807128 ref NP_622299.1	0.9586	2.4	FOF1 ATP synthase subunit alpha
133	gi 20806645 ref NP_621816.1	0.953	2.9	S-layer-like domain-containing protein

Table SI-3 The false rate of protein identification for on-line methods

Run	False rate
1	0
2	0
3	0
4	0
5	0
6	0

Table SI-4 The false rate of protein identification for segment methods

run	False rate
1	0.746%
2	0.763%
3	0.752%