

Supplementary Materials for

Intrinsic Disorder in S100 Proteome

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TITLE RUNNING HEAD: Intrinsic disorder in S100 proteins

Table S1. The results of disorder analysis for S100 proteins from Swiss-Prot database using VSL2P algorithm (48), CH-plot (25) and CDFs analysis (61) (62). Disorder designations: “D”, disordered sequence; “.”, ordered protein. The data on posttranslational modifications (Swiss-Prot database), available 3D structures of Ca²⁺-free forms, and the number of known interactions (IntAct database, <http://www.ebi.ac.uk/intact/>) are also shown.

Table S2. The output of alignment of Swiss-Prot S100 sequences using MUSCLE 3.6 algorithm

TABLES

Table S1. The results of disorder analysis for S100 proteins from Swiss-Prot database using VSL2P algorithm (48), CH-plot (25) and CDFs analysis (61) (62). Disorder designations: “D”, disordered sequence; “.”, ordered protein. The data on posttranslational modifications (Swiss-Prot database), available 3D structures of Ca²⁺-free forms, and the number of known interactions (IntAct database, <http://www.ebi.ac.uk/intact/>) are also shown.

<i>N_o</i>	<i>S100 group</i>	<i>UniProt entry</i>	<i><P></i>	<i>L_{dis}, %</i>	<i>Number of residues</i>	<i>VSL2P prediction</i>	<i>CH-plot prediction</i>	<i>CDF prediction</i>	<i>PTMs: residue, PTM</i>	<i>3D structure of Ca²⁺-free form</i>	<i>Number of interactions, all/non-S100</i>
1	A1	P02639	0.531	63.8	94	D	.	D	blocked N-terminus (Gly)	2jpt, NMR; β-ME	0
2	A1	P23297	0.525	63.8	94	D	.	D	n/a		5/1
3	A1	P35467	0.510	58.5	94	D	.	D	n/a	1k2h, NMR	0
4	A1	P56565	0.476	48.9	94	.	.	D	n/a		1/0
5	A1	Q5RC36	0.525	63.8	94	D	.	D	n/a		0
6	A1	Q7LZT1	0.441	44.2	95	.	.	D	n/a		0
7	A2	P10462	0.510	52.6	97	D	.	D	n/a		0
8	A2	P29034	0.475	46.9	98	.	.	D	n/a	2rgi, X-ray; Na ⁺	0
9	A3	P33764	0.444	45.5	101	.	.	.	n/a	1kso, X-ray	1/1
10	A3	P62818	0.434	34.7	101	.	.	.	n/a		0
11	A3	P62819	0.434	34.7	101	.	.	.	n/a		0
12	A4	P05942	0.495	47.5	101	.	.	.	N-acetyl-Ala (by similarity); 35, N6-acetyl-Lys (by similarity)		0
13	A4	P07091	0.538	52.5	101	D	.	D	N-acetyl-Ala; 35, N6-acetyl-Lys (by similarity)		2/0
14	A4	P26447	0.511	50.5	101	D	.	D	N-acetyl-Ala (by similarity);	1m31, NMR	4/3

									7, N6-acetyl-Lys; 35, N6-acetyl-Lys		
15	A4	P35466	0.533	51.5	101	D	.	D	N-acetyl-Ala; 7, N6-acetyl-Lys (by similarity); 35, N6-acetyl-Lys (by similarity)		0
16	A4	Q9TV56	0.510	51.5	101	D	.	D	7, N6-acetyl-Lys (by similarity); 35, N6-acetyl-Lys (by similarity)		0
17	A5	P33763	0.633	72.8	92	D	.	D	n/a	2kax, NMR	0
18	A5	P63083	0.673	76.3	93	D	.	D	n/a		0
19	A5	P63084	0.673	76.3	93	D	.	D	n/a		0
20	A6	O77691	0.397	40.2	92	.	.	.	40, N6-acetyl-Lys (by similarity)		0
21	A6	P05964	0.434	42.7	89	.	.	.	40, N6-acetyl-Lys (by similarity)		1/1
22	A6	P06703	0.421	42.2	90	.	.	.	40, N6-acetyl-Lys	1k9p and 1k8u, X-ray	3/1
23	A6	P14069	0.417	42.7	89	.	.	.	40, N6-acetyl-Lys (by similarity)		0

24	A6	P30801	0.446	45.6	90	.	.	.	40, N6-acetyl-Lys (by similarity)	1cnp and 2cnp, NMR	0
25	A6	Q2EN75	0.393	41.1	90	.	.	.	40, N6-acetyl-Lys (by similarity)		0
26	A6	Q98953	0.450	46.7	92	.	.	.	n/a		0
27	A7	P31151	0.652	87.1	101	D	.	D	N-acetyl-Ser; 47-96, disulfide bond		6/6
28	A7	Q14ST5	0.544	69.3	101	D	.	.	n/a		0
29	A7	Q28050	0.507	58.4	101	D	D	.	n/a		0
30	A7A	Q86SG5	0.562	71.3	101	D	.	.	N-acetyl-Ser (by similarity)		0
31	A8	P05109	0.289	17.2	93	.	.	.	n/a		28/27
32	A8	P27005	0.307	16.9	89	.	.	.	n/a		3/1
33	A8	P28782	0.356	14.6	89	.	.	.	n/a		0
34	A8	P50115	0.362	13.5	89	.	.	.	N-acetyl-Ala		0
35	A9	P06702	0.586	65.8	114	D	D	D	blocked N-terminus (Thr); 113, phospho-Thr		13/12
36	A9	P28783	0.652	59.6	156	D	D	D	n/a		0
37	A9	P31725	0.683	97.3	113	D	D	D	N-acetyl-Ala; 107, pro-methyl-His		2/0
38	A9	P50116	0.599	73.5	113	D	D	D	N-acetyl-Ala; 107, pro-methyl-His		0
39	A10	P04163	0.508	59.4	96	D	.	.	23, N6-acetyl-Lys (by similarity); 25, phospho-Tyr		0

									(by similarity); 28, N6-acetyl-Lys (by similarity); 37, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by similarity)		
40	A10	P05943	0.488	56.8	95	.	.	.	23, N6-acetyl-Lys (by similarity); 25, phospho-Tyr (by similarity); 28, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by similarity)		1/1
41	A10	P08207	0.541	58.8	97	D	.	D	23, N6-acetyl-Lys (by similarity); 28, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by		2/2

									similarity)		
42	A10	P27003	0.497	59.8	97	.	.	.	n/a		0
43	A10	P27004	0.505	61.5	96	D	.	D	n/a		0
44	A10	P60902	0.511	57.7	97	D	.	.	23, N6-acetyl-Lys (by similarity); 25, phospho-Tyr (by similarity); 28, N6-acetyl-Lys (by similarity); 37, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by similarity)		0
45	A10	P60903	0.511	57.7	97	D	.	.	23, N6-acetyl-Lys; 25, phospho-Tyr; 28, N6-acetyl-Lys; 37, N6-acetyl-Lys; 54, N6-acetyl-Lys; 57, N6-acetyl-Lys	1a4p, X-ray	2/2
46	A10	P62504	0.511	57.7	97	D	.	.	23, N6-acetyl-Lys (by similarity); 25, phospho-Tyr (by similarity); 28, N6-acetyl-		0

									Lys (by similarity); 37, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by similarity)		
47	A10	Q6SQH4	0.511	57.7	97	D	.	.	23, N6-acetyl-Lys (by similarity); 25, phospho-Tyr (by similarity); 28, N6-acetyl-Lys (by similarity); 37, N6-acetyl-Lys (by similarity); 54, N6-acetyl-Lys (by similarity); 57, N6-acetyl-Lys (by similarity)		0
48	A11	P24479	0.403	42.6	101	.	.	.	n/a		0
49	A11	P24480	0.371	25.5	102	.	.	.	7, phospho-Thr (by similarity); 10, interchain disulfide bond (by similarity)	1nsh, NMR	0
50	A11	P31949	0.396	29.5	105	.	.	.	3, N6-acetyl-Lys; 6, phospho-Ser; 10, phospho-		7/5

									Thr; 30, phospho-Tyr; 32, phospho-Tyr; 13, interchain disulfide bond		
51	A11	P31950	0.469	55.6	99	.	.	.	N-acetyl-Met; 8, phospho-Thr (by similarity); 11, interchain disulfide bond (by similarity)		0
52	A11	P50543	0.371	31.6	98	.	.	.	5, phospho-Thr (by similarity); 8, interchain disulfide bond (by similarity)		0
53	A11	Q6B345	0.368	24.5	98	.	.	.	5, phospho-Thr (by similarity); 8, interchain disulfide bond (by similarity)		1/1
54	A12	P79105	0.292	16.3	92	.	.	.	n/a		0
55	A12	P80310	0.314	20.7	92	.	.	.	n/a		0
56	A12	P80511	0.353	21.7	92	.	.	.	n/a	2wcf and 2wce, X-ray; Na ⁺	0
57	A13	P79342	0.667	89.8	98	D	.	D	32, phospho-Ser (by similarity)		0
58	A13	P97352	0.682	92.9	98	D	.	.	32, phospho-Ser	2cxj, NMR	0
59	A13	Q99584	0.715	99.0	98	D	.	D	32, phospho-Ser (by similarity)	1yur, NMR	0
60	A14	Q3MHP3	0.584	75.0	104	D	.	.	32, phospho-Tyr (by similarity)		0
61	A14	Q9D2Q8	0.601	82.7	104	D	.	.	32, phospho-Tyr (by similarity)		0
62	A14	Q9HCY8	0.620	85.6	104	D	.	.	32, phospho-Tyr		1/0

63	A15A	A7K6Y8	0.399	37.0	108	.	.	.	n/a		0
64	A15A	A7K6Y9	0.381	34.3	108	.	.	.	n/a		0
65	A15A	Q6S5I3	0.389	34.3	108	.	.	.	n/a		0
66	A16	Q0VCM 0	0.583	65.0	103	D	.	.	103, phospho-Ser (by similarity)		0
67	A16	Q96FQ6	0.448	46.6	103	.	.	.	103, phospho-Ser		1/0
68	B	P02638	0.531	58.7	92	D	D	D	N-acetyl-Ser	1cfp, NMR	1/1
69	B	P04271	0.574	65.2	92	D	D	D	blocked N-terminus (Ser)	2pru, NMR	4/0
70	B	P04631	0.587	70.7	92	D	D	D	n/a	1b4c, NMR	0
71	B	P50114	0.601	75.0	92	D	D	D	n/a		0
72	B	Q6YNR6	0.574	65.2	92	D	D	D	n/a		0
73	G	P02632	0.593	69.6	79	D	.	D	N-acetyl-Ser(Ala)		0
74	G	P02633	0.641	81.0	79	D	D	D	N-acetyl-Ser	1clb, NMR	0
75	G	P02634	0.759	89.9	79	D	.	D	N-acetyl-Ser		0
76	G	P29377	0.578	60.8	79	D	D	D	N-acetyl-Ser (by similarity)		0
77	G	P97816	0.736	93.7	79	D	.	D	n/a		0
78	G	Q865V3	0.648	81.0	79	D	.	D	N-acetyl-Ser (by similarity)		0
79	P	P25815	0.463	47.4	95	.	.	D	n/a	1ozo, NMR	5/3
80	TCHHL 1	Q5QJ38	0.875	91.0	904	D	D	D	n/a		0
81	Z	Q8WXG 8	0.492	50.5	99	.	.	.	n/a		0

* n/a, data not available in Swiss-Prot database

Table S2. The output of alignment of Swiss-Prot S100 sequences using MUSCLE 3.6 algorithm

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>sp|Q0VCM0|S10AG_BOVIN Protein S100-A16 OS=Bos taurus GN=S100A16 PE=3 SV=1
-----MADSYTELEKAVVVLVENFYKYVSKHSLVKNKISKSSFRKMLQKELNHML
T--DTGNRKAADKLIQNLNLDANHDGRISFDEYWTLLIGGITSPIANLIRQQEQSSS-----
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>sp|Q96FQ6|S10AG_HUMAN Protein S100-A16 OS=Homo sapiens GN=S100A16 PE=1 SV=1
-----MSDCYTELEKAVIVLVENFYKYVSKYSLVKNKISKSSFREMLQKELNHML
S--DTGNRKAADKLIQNLNLDANHDGRISFDEYWTLLIGGITGPIAKLIHEQQEQSSS-----
-----
>sp|P27005|S10A8_MOUSE Protein S100-A8 OS=Mus musculus GN=S100a8 PE=1 SV=3
-----MPSELEKALSNIIDVYHNYSGIKG-NHHALYKNDFFKMMVTTECPQFV
Q-----NINIENLRFRELDINSDNAINFEEFLAMVIKVGVAASHKDSHKE-----
-----
>sp|P50115|S10A8_RAT Protein S100-A8 OS=Rattus norvegicus GN=S100a8 PE=1 SV=3
-----MATELEKALSNIIEVYHNYSGIKG-NHHALYRDDFRKMMVTTECPQFV
Q-----NKNTESLFKELDVSNDNAINFEEFLVLVIRVGVAAHKSHE-----
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>sp|P05109|S10A8_HUMAN Protein S100-A8 OS=Homo sapiens GN=S100A8 PE=1 SV=1
-----MLTELEKALSNIIDVYHKYSLIKG-NFHAVYRDDLKKLLETECPQYI
R-----KKGADVWFKELDINTDGA VNFQEFLLILVIKMGVAAHKKSHKESHE-----
-----
>sp|P28782|S10A8_BOVIN Protein S100-A8 OS=Bos taurus GN=S100A8 PE=1 SV=2
-----MLTDLECAINSLIDVYHKYSLKKG-NYHAVYRDDLQKLETECPKFM
K-----KKDADTWFKELDINQDGGINFEEFLVLVIKVGLEAHEEIHKE-----
-----
>sp|Q9HCY8|S10AE_HUMAN Protein S100-A14 OS=Homo sapiens GN=S100A14 PE=1 SV=1
MGQCRSANAEDAQEFSDVERAIETLIKNFHQYSV-EG-GKETLTPSELRLDLVTQQLPHLM
P-----SNCGLEEKIANLGNCSNDKLEFRSFWELIGEAAKSVKLERPVRGH-----
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>sp|Q3MHP3|S10AE_BOVIN Protein S100-A14 OS=Bos taurus GN=S100A14 PE=3 SV=1
MGQCRSANAEDAQELS DVERAIETLIKNFHQYSV-EG-GKETLTPSELRLDLVTQQLPHLM
P-----SNCGLEEKIANLGNCSNDKLEFGSFWELIGEAAKSVKLENVAVQGS-----
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>sp|Q9D2Q8|S10AE_MOUSE Protein S100-A14 OS=Mus musculus GN=S100a14 PE=2 SV=1
MGQCRSANAEDAQEFSDVERAIETLIKNFHKYSV-AG-KKETLTPAELRLDLVTQQLPHLM
P-----SNCGLEEKIANLGNCSNDKLEFGSFWELIGEAAKSVKMERPVTRS-----
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>sp|P97352|S10AD_MOUSE Protein S100-A13 OS=Mus musculus GN=S100a13 PE=1 SV=1
-----MAAETLLEAAIETVVSTFFTFAGREG-RKGS LNINEFKELATQQLPHLL
K-----DVGSLDEKMKTL DVNQDSELR FSEYWR LIGELAKEVRKEKALGIRKK-----
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>sp|Q99584|S10AD_HUMAN Protein S100-A13 OS=Homo sapiens GN=S100A13 PE=1 SV=1
-----MAAEPLTELEESIETVVVTTFFTFARQEG-RKDSL SVNEFKELVTQQLPHLL
K-----DVGSLDEKMKSLDVNQDSELKFNFWRLIGELAKEIRKKKDLKIRKK-----
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>sp|P79342|S10AD_BOVIN Protein S100-A13 OS=Bos taurus GN=S100A13 PE=3 SV=2
-----MAAEPLTELEAAIETVVVTTFFTFAGREG-RKGSLSVNEFKELVTQQLPHLL
K-----DVGSLDEKMKSLDVNQDSELKFNFWRLIGELAKEIRKEKALEIRKK-----
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>sp|P33764|S10A3_HUMAN Protein S100-A3 OS=Homo sapiens GN=S100A3 PE=1 SV=1
-----MARPLEQAVAAIVCTFQEYAGRCG-DKYKLCQAE LKELLQKELATWT
P--TEFRECDY NKFM SVLD TNKDCEVDFVEYVRSLACLCLYCHEYFKDCPSEPPCSQ---
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>sp|P62818|S10A3_MOUSE Protein S100-A3 OS=Mus musculus GN=S100a3 PE=2 SV=1
-----MTRPLEQAVAAIVCTFQEYAGRCG-DKYKICQSELKELLQKELPTWT
P--SEFRECDY NKFM SVLD TNKDCEVDFGEYVRSLASLCLYCHEYFKCEPPEPPCPQ---
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>sp|P62819|S10A3_RAT Protein S100-A3 OS=Rattus norvegicus GN=S100a3 PE=1 SV=1
-----MTRPLEQAVAAIVCTFQEYAGRCG-DKYKICQSELKELLQKELPTWT
P--SEFRECDY NKFM SVLD TNKDCEVDFGEYVRSLASLCLYCHEYFKCEPPEPPCPQ---
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>sp|P80511|S10AC_HUMAN Protein S100-A12 OS=Homo sapiens GN=S100A12 PE=1 SV=2
-----MTKLEEHLEGIVNIFHQYSVRKG-HFD T LSKGELKQLLTKELANTI
K--NIKDKAVIDEIFQGLDANQDEQVDFQEFISLVAIALKAAHYHHTHKE-----
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>sp|P79105|S10AC_BOVIN Protein S100-A12 OS=Bos taurus GN=S100A12 PE=1 SV=3
-----MTKLEDHLEGIINIFHQYSVRVG-HFD T LNKRELKQLITKELPKTL
Q--NTKDQPTIDKIFQDL DADKDGAVSFEEFVVLVSRVLKTAHIDIHKE-----
-----
>sp|P80310|S10AC_PIG Protein S100-A12 OS=Sus scrofa GN=S100A12 PE=1 SV=2
-----MTKLEDHLEGIINIFHQYSVRLG-HYD T LIKRELKQLITKELPNTL
K--NTKDQGTIDKIFQNL DANDQDEQVSFKEFVVLVTDVLTITAHDNHKE-----
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>sp|P31725|S10A9_MOUSE Protein S100-A9 OS=Mus musculus GN=S100a9 PE=1 SV=3
-----MANKAPSQMERSITTIIDTFHQYSRKEG-HPD T LSKKEFRQMVEAQLATFM
KK-EKRNEALINDIMEDLD TNQDNQLSFEECMMLMAKLIFACHEK L HENNPRGHGSHGK
GCGK-----
>sp|P50116|S10A9_RAT Protein S100-A9 OS=Rattus norvegicus GN=S100a9 PE=1 SV=3
-----MAAKTGSQ LERSISTIINV F HQYSRKYG-HPD T LNKAEFKEMVNKDLPNFL
KR-EKRNENLLRDIMEDLD TNQDNQLSFEECMMLMGKLI FACHEK L HENNPRGHDHSHGK
GCGK-----
>sp|P06702|S10A9_HUMAN Protein S100-A9 OS=Homo sapiens GN=S100A9 PE=1 SV=1
-----MTCKMSQ LERNIETIINT F HQYSVKLG-HPD T LNQGEFKELVRKDLQNFL
KK-ENKNEKVIEHIMEDLD TNADKQLSFEEFIMLMARLTWASHEKMHEGDEGPGHHHKPG
LGEGTP-----
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>sp|P28783|S10A9_BOVIN Protein S100-A9 OS=Bos taurus GN=S100A9 PE=1 SV=3
-----MEDKMSQMESSIETIINIFHQYSVRLG-HYDTLIQKEFKQLVQKELPNFL
KK-QKKNEAAINEIMEDLDTNVDKQLSFEEFIMLVARLTVASHEEMHNTAPPQGHRHGP
GYGKGGSGSCSGQSPDQGSDDLGLSHGHGHSHGGHGHSHGGHGHSH
>sp|P24479|S10AB_CHICK Protein S100-A11 OS=Gallus gallus GN=S100A11 PE=1 SV=2
-----MSKVSPTETERCIESLLAVFQRYAGREG-DNLKLSKKEFRTFMNTLASFT
K--NQKDPVVDMMKRLDINSDGQLDFQEFLNLIGGIIVACHDALLVQPPHP-----
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>sp|P31950|S10AB_PIG Protein S100-A11 OS=Sus scrofa GN=S100A11 PE=1 SV=1
-----MAKRPTETERCIESLIAIFQKHAGRDG-NNTKISKTEFLIFMNTLAAFT
Q--NQKDPGVLDMMKLLDLSDGQLDFQEFLNLIGGLAIACHDSFIKSTQK-----
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>sp|P31949|S10AB_HUMAN Protein S100-A11 OS=Homo sapiens GN=S100A11 PE=1 SV=2
-----MAKISSPTETERCIESLIAVFQKYAGKDG-YNVTLTKTEFLSFMNTLAAFT
K--NQKDPGVLDMMKLLDTNSDGQLDFSEFLNLIGGLAMACHDSFLKAVPSQKRT----
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>sp|P24480|S10AB_RABIT Protein S100-A11 OS=Orctolagus cuniculus GN=S100A11 PE=1 SV=2
-----MSRPTETERCIESLIAVFQKYAGKDG-HSVTLTKTEFLSFMNTLAAFT
K--NQKDPGVLDMMKLLDLNSDGQLDFQEFLNLIGGLAVACHESFVKAAPPQKRF----
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>sp|P50543|S10AB_MOUSE Protein S100-A11 OS=Mus musculus GN=S100a11 PE=2 SV=1
-----MPTETERCIESLIAVFQKYSKDG-NNTQLSKTEFLSFMNTLAAFT
K--NQKDPGVLDMMKLLDLNCDGQLDFQEFLNLIGGLAIACHDSFIQTSQKRI-----
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>sp|Q6B345|S10AB_RAT Protein S100-A11 OS=Rattus norvegicus GN=S100a11 PE=2 SV=1
-----MPTETERCIESLIAVFQKYSKDG-NSCHLSKTEFLSFMNTLAAFT
K--NQKDPGVLDMMKLLDLNSDGQLDFQEFLNLIGGLAIACHESFLQTSQKRI-----
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>sp|P97816|S100G_MOUSE Protein S100-G OS=Mus musculus GN=S100g PE=2 SV=3
-----MCAEKSPAEMKSIFQKYAAKEG-DPDQLSKEELKLLIQSEFPSSL
K----ASSTLDNLFKELDKNGDGEVSYEEFEAFFKLSQ-----
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>sp|P02634|S100G_RAT Protein S100-G OS=Rattus norvegicus GN=S100g PE=1 SV=3
-----MSAKKSPEEMKSIFQKYAAKEG-DPNQLSKEELKLLIQSEFPSSL
K----ASSTLDNLFKELDKNGDGEVSYEEFEVFFKLSQ-----
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>sp|Q865V3|S100G_HORSE Protein S100-G OS=Equus caballus GN=S100G PE=3 SV=1
-----MSVKKSPPEELKKIFEKYAAKEG-DPDQLSKEELKLLIQNELPALL
K----GSSSIDDLFKELDKNGDGEVSFEFFQVLVKKISQ-----
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>sp|P02632|S100G_PIG Protein S100-G OS=Sus scrofa GN=S100G PE=1 SV=3
-----MSAQKSPAELKSIFEKYAAKEG-DPNQLSKEELKQLIQAEFPSSL
K----GPRTLDDLFQELDKNGDGEVSYEEFEVFFKLSQ-----
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>sp|P29377|S100G_HUMAN Protein S100-G OS=Homo sapiens GN=S100G PE=1 SV=2
-----MSTKKSPEELKRIFEKYAAKEG-DPDQLSKDELKLLIQAEFPSLL
K-----GPNTLDDLFQELDKNGDGEVSFEFQVLVKKISQ-----
-----
>sp|P02633|S100G_BOVIN Protein S100-G OS=Bos taurus GN=S100G PE=1 SV=3
-----MSAKKSPEELKGI FEKYAAKEG-DPNQLSKEELKLLLQTEFPSLL
K-----GPSTLDELFEELDKNGDGEVSFEFQVLVKKISQ-----
-----
>sp|P27004|S10AA_XENLA Protein S100-A10 OS=Xenopus laevis GN=s100a10 PE=3 SV=1
-----MVAPSELEHSMEKMLLTFHKFA---G-EKNYMNRRDDLQKLLDSEFSEFL
K--NQNDPMTVDKIMKDLDDCRKGQVNFERSYCSLIAGLLIACNEYVVKHMKKR-----
-----
>sp|P27003|S10AA_CHICK Protein S100-A10 OS=Gallus gallus GN=S100A10 PE=3 SV=2
-----MPSQMEHAMETLMFTFHKYA---G-DKNYLSKEDLRALMEKEFPGF
E--NQRDPMALDKIMKDLQCRDGKVGQSFSLVAGLTIACNDYFVVHMKQKGRK----
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>sp|P04163|S10AA_PIG Protein S100-A10 OS=Sus scrofa GN=S100A10 PE=1 SV=2
-----MPSQMEHAMETMMFTFHKFA---G-DKGYLTKEDLRVLMKEKEFPGF
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLIAGLTIACNDYFVVHMKQKGGK-----
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>sp|P60902|S10AA_BOVIN Protein S100-A10 OS=Bos taurus GN=S100A10 PE=1 SV=2
-----MPSQMEHAMETMMFTFHKFA---G-DKGYLTKEDLRVLMKEKEFPGF
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLIAGLTIACNDYFVVHMKQKGGK----
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>sp|P60903|S10AA_HUMAN Protein S100-A10 OS=Homo sapiens GN=S100A10 PE=1 SV=2
-----MPSQMEHAMETMMFTFHKFA---G-DKGYLTKEDLRVLMKEKEFPGF
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLIAGLTIACNDYFVVHMKQKGGK----
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>sp|P62504|S10AA_MACMU Protein S100-A10 OS=Macaca mulatta GN=S100A10 PE=3 SV=2
-----MPSQMEHAMETMMFTFHKFA---G-DKGYLTKEDLRVLMKEKEFPGF
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLIAGLTIACNDYFVVHMKQKGGK----
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>sp|Q6SQH4|S10AA_RABIT Protein S100-A10 OS=Orctolagus cuniculus GN=S100a10 PE=3 SV=3
-----MPSQMEHAMETMMFTFHKFA---G-DKGYLTKEDLRVLMKEKEFPGF
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLIAGLTIACNDYFVVHMKQKGGK----
-----
>sp|P05943|S10AA_RAT Protein S100-A10 OS=Rattus norvegicus GN=S100a10 PE=1 SV=2
-----MPSQMEHAMETMMLTFHRFA---G-EKNYLTKEEDLRVLMEREFPGFL
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLVAGLTIACNDYFVVHMKQKGGK-----
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>sp|P08207|S10AA_MOUSE Protein S100-A10 OS=Mus musculus GN=S100a10 PE=2 SV=2
-----MPSQMEHAMETMMLTFHRFA---G-DKDHLTKEDLRVLMEREFPGFL
E--NQKDPLAVDKIMKDLQCRDGKVGQSFSLVAGLTIACNDYFVVNMKQKGGK----
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>sp|P33763|S10A5_HUMAN Protein S100-A5 OS=Homo sapiens GN=S100A5 PE=1 SV=2
-----METPLEKALTTMVTTTFHKYSGREG-SKLTLSRKELKELIKKELC--L
G--E-MKKESSIDDLMKSLDKNSDQEIDFKEYSVFLTMLCMAYNDFFLLEDNK-----
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>sp|P63083|S10A5_RAT Protein S100-A5 OS=Rattus norvegicus GN=S100a5 PE=1 SV=1
-----METPLEKALTTMVTTTFHKYSGREG-SKLTLSRKELKELIKTELS--L
A--EKMKESSIDNLMKSLDKNSDQEIDFKEYSVFLTTLCMAYNDFFLLEDNK-----
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>sp|P63084|S10A5_MOUSE Protein S100-A5 OS=Mus musculus GN=S100a5 PE=2 SV=1
-----METPLEKALTTMVTTTFHKYSGREG-SKLTLSRKELKELIKTELS--L
A--EKMKESSIDNLMKSLDKNSDQEIDFKEYSVFLTTLCMAYNDFFLLEDNK-----
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>sp|O77691|S10A6_HORSE Protein S100-A6 OS=Equus caballus GN=S100A6 PE=3 SV=1
-----MACPLDQAISLLVAIFHKYSSREG-DKNTLSKGELKELIQKELT--I
G--AELEDSEIAKLLDDLDQNKDQVVNFQYVTFGLGALAMIYNEVLKACS-----
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>sp|Q98953|S10A6_CHICK Protein S100-A6 OS=Gallus gallus GN=S100A6 PE=3 SV=1
-----MAAPLDQAIGLLVATFHKYSGKEG-DKNSLSKGELKELIQKELT--I
G--PKLKDAEIAGLMEDLDRNKDQEVNFQYVTFGLGALAMIYNEALLQYK-----
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>sp|Q2EN75|S10A6_PIG Protein S100-A6 OS=Sus scrofa GN=S100A6 PE=3 SV=1
-----MACPLDQAIGLLVAIFHKYSGQEG-DKNTLSKSELKELIQKELT--I
G--AKLQDAEIAKLMDDLDRNKDQVVNFQYVTFGLGALAMIYNDVLRG-----
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>sp|P30801|S10A6_RABIT Protein S100-A6 OS=Oryctolagus cuniculus GN=S100A6 PE=1 SV=2
-----MASPLDQAIGLLIGIFHKYSGKEG-DKHTLSKKELKELIQKELT--I
G--SKLQDAEIVKLMDDLDRNKDQEVNFQYVITFLGALAMIYNEALKG-----
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>sp|P06703|S10A6_HUMAN Protein S100-A6 OS=Homo sapiens GN=S100A6 PE=1 SV=1
-----MACPLDQAIGLLVAIFHKYSGREG-DKHTLSKKELKELIQKELT--I
G--SKLQDAEIARLMEDLDRNKDQEVNFQYVTFGLGALALIYNEALKG-----
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>sp|P05964|S10A6_RAT Protein S100-A6 OS=Rattus norvegicus GN=S100a6 PE=1 SV=3
-----MACPLDQAIGLLVAIFHKYSGKEG-DKHTLSKKELKELIQKELT--I
G--AKLQDAEIARLMDDLDRNKDQEVNFQYVAFGLGALALIYNEALK-----
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>sp|P14069|S10A6_MOUSE Protein S100-A6 OS=Mus musculus GN=S100a6 PE=1 SV=3
-----MACPLDQAIGLLVAIFHKYSGKEG-DKHTLSKKELKELIQKELT--I
G--SKLQDAEIARLMDDLDRNKDQEVNFQYVAFGLGALALIYNEALK-----
-----
>sp|P05942|S10A4_RAT Protein S100-A4 OS=Rattus norvegicus GN=S100a4 PE=2 SV=1
-----MARPLEEALDVIVSTFHKYSGNEG-DKFKLNKTELKELLTRELPSFL
G--RRTDEAAFQKLMNNLDSNRDNEVDFQYCVFLSCIAMMCNEFFEGCPDKEPRK---
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>sp|P07091|S10A4_MOUSE Protein S100-A4 OS=Mus musculus GN=S100a4 PE=1 SV=1
-----MARPLEEALDVIVSTFHKYSGKEG-DKFKLNKTELKELLTRELPSFL
G--KRTDEAAFQKVMNSLDSNRDNEVDFQEYCVFLSCIAMMCNEFFEGCPDKEPRKK---
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>sp|Q9TV56|S10A4_CANFA Protein S100-A4 OS=Canis familiaris GN=S100A4 PE=3 SV=1
-----MTFPLEKALDVMVSTFHKYSGKEG-DKFKLNKSELKELLMRELPSFL
G--KRTDEAAFQKLMSNLSNRDNEVDFQEYCVFLSCVAMMCNEFFEGFPDKQPRKK---
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>sp|P26447|S10A4_HUMAN Protein S100-A4 OS=Homo sapiens GN=S100A4 PE=1 SV=1
-----MACPLEKALDVMVSTFHKYSGKEG-DKFKLNKSELKELLTRELPSFL
G--KRTDEAAFQKLMSNLSNRDNEVDFQEYCVFLSCIAMMCNEFFEGFPDKQPRKK---
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>sp|P35466|S10A4_BOVIN Protein S100-A4 OS=Bos taurus GN=S100A4 PE=1 SV=2
-----MAYPLEKALDVMVSTFHKYSGKEG-DKFKLNKSELKELLTRELPSFL
G--KRTDETAFAQKLMSNLDCKNDNEVDFQEYCVFLSCIAMMCNEFFEGFPDKQPRKK---
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>sp|P10462|S10A2_BOVIN Protein S100-A2 OS=Bos taurus GN=S100A2 PE=1 SV=1
-----MSSPLEQALAVMVATFHKYSGQEG-DKFKLSKGEMKELLHKELPSFV
G--EKVDEEGLKKLKMGDLDENSDQQVDFQEYAVFLALITIMCNDFQGPSARS-----
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>sp|P29034|S10A2_HUMAN Protein S100-A2 OS=Homo sapiens GN=S100A2 PE=1 SV=3
-----MMCSSLEQALAVLVTTFHKYSCQEG-DKFKLSKGEMKELLHKELPSFV
G--EKVDEEGLKKLKMGSLDENSDQQVDFQEYAVFLALITVMCNDFQGPCDRP-----
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>sp|P25815|S100P_HUMAN Protein S100-P OS=Homo sapiens GN=S100P PE=1 SV=2
-----MTELETAMGMIIDVFSRYSGSEG-STQTLTKGELKVLMEKELPGFL
Q--SGKDKDAVDKLLKDLKDANGDAQVDFSEFIVFAAITSACHKYFEKAGLK-----
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>sp|P02638|S100B_BOVIN Protein S100-B OS=Bos taurus GN=S100B PE=1 SV=2
-----MSELEKAVVALIDVFHQYSGREG-DKHKLKSELKELINNELSHFL
E--EIKEQEVVDKVMETLSDGDGECDFQEFMAFVAMITTACHEFFEHE-----
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>sp|P04631|S100B_RAT Protein S100-B OS=Rattus norvegicus GN=S100b PE=1 SV=2
-----MSELEKAMVALIDVFHQYSGREG-DKHKLKSELKELINNELSHFL
E--EIKEQEVVDKVMETLDEDGDGECDFQEFMAFVSMVTTACHEFFEHE-----
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>sp|P04271|S100B_HUMAN Protein S100-B OS=Homo sapiens GN=S100B PE=1 SV=2
-----MSELEKAMVALIDVFHQYSGREG-DKHKLKSELKELINNELSHFL
E--EIKEQEVVDKVMETLDNDGDGECDFQEFMAFVAMVTTACHEFFEHE-----
-----
>sp|Q6YNR6|S100B_RABIT Protein S100-B OS=Oryctolagus cuniculus GN=S100B PE=3 SV=3
-----MSELEKAMVALIDVFHQYSGREG-DKHKLKSELKELINNELSHFL
E--EIKEQEVVDKVMETLDNDGDGECDFQEFMAFVAMVTTACHEFFEHE-----
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>sp|P50114|S100B_MOUSE Protein S100-B OS=Mus musculus GN=S100b PE=2 SV=2
-----MSELEKAMVALIDVFHQYSGREG-DKHKLKSELKELINNELSHFL
E--EIKEQEVDKVMETLDEDGDGECDFQEFMAFVAMVTTACHEFFEHE-----

>sp|Q8WVG8|S100Z_HUMAN Protein S100-Z OS=Homo sapiens GN=S100Z PE=1 SV=3
-----MPTQLEMAMDTMIRIFHRYSGKAR-KRFKLSKSELKLLQRELTEFL
S--CQKETQLVDKIVQDL DANKDNEVDNFNEFVVMVAALTVACNDYFVEQLKKKGK-----

>sp|Q7LZT1|S10A1_MISFO Protein S100-A1 OS=Misgurnus fossilis GN=s100a1 PE=1 SV=1
-----VSQLESAMESLIKVFHTYSSKEG-DKYKLSKAELKSLQELNDFL
S--ASKDPMVVEKIMSDLDENQDGEVDFQEFVVLVAALTVACNEFFIESMKN-----

>sp|P56565|S10A1_MOUSE Protein S100-A1 OS=Mus musculus GN=S100a1 PE=1 SV=2
-----MGSELESAMETLINVFHAHSGQEG-DKYKLSKELKDLLQTELSGFL
D--VQKDADA VDKVMKELDENG DGEVDFKEYVVLVAALTVACNFFWETS-----

>sp|P35467|S10A1_RAT Protein S100-A1 OS=Rattus norvegicus GN=S100a1 PE=1 SV=3
-----MGSELETAMETLINVFHAHSGKEG-DKYKLSKELKDLLQTELSFL
D--VQKDADA VDKIMKELDENG DGEVDFQEFVVLVAALTVACNFFWENS-----

>sp|P02639|S10A1_BOVIN Protein S100-A1 OS=Bos taurus GN=S100A1 PE=1 SV=2
-----MGSELETAMETLINVFHAHSGKEG-DKYKLSKELKELLQTELSGFL
D--AQKDADA VDKVMKELDENG DGEVDFQEYVVLVAALTVACNFFWENS-----

>sp|P23297|S10A1_HUMAN Protein S100-A1 OS=Homo sapiens GN=S100A1 PE=1 SV=2
-----MGSELETAMETLINVFHAHSGKEG-DKYKLSKELKELLQTELSGFL
D--AQKDADA VDKVMKELDENG DGEVDFQEYVVLVAALTVACNFFWENS-----

>sp|Q5RC36|S10A1_PONAB Protein S100-A1 OS=Pongo abelii GN=S100A1 PE=3 SV=3
-----MGSELETAMETLINVFHAHSGKEG-DKYKLSKELKELLQTELSGFL
D--AQKDADA VDKVMKELDENG DGEVDFQEYVVLVAALTVACNFFWENS-----

>sp|Q6S5I3|S115A_MOUSE Protein S100-A15A OS=Mus musculus GN=S100a15a PE=2 SV=1
-----MPDTPVEDSLFQIIHCFHHYAAREG-DKETLSLEELKALLLDSVPRFM
DTLGRRQPYITELFRAADKKNQICFDEFLYILGKLVKDYHLQFHRQLCAHYCTEHS
Y-----

>sp|A7K6Y8|S115A_GORGO Protein S100-A15A OS=Gorilla gorilla gorilla GN=S100A15A PE=3 SV=1
-----MTDTPVEESLFQIIHCFHQYAARQG-DMETLSLQELQALLMDNMPRFM
DSLGRKEPYVTELFQATDKNRDNQICFDEFLYILGKLVKDYHLQYHRQLCARYCAQHS
Y-----

>sp|A7K6Y9|S115A_PONAB Protein S100-A15A OS=Pongo abelii GN=S100A15A PE=3 SV=1
-----MTDTPVEESLFQIIHCFHQYAARQG-DMETLSLQELQALLMDNMPRFM
DSLGRKEPYITELFQAADKKNQICFDEFLYILGKLVKDYHLQYHRQLCARYCAQHS
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>sp|Q28050|S10A7_BOVIN Protein S100-A7 OS=Bos taurus GN=S100A7 PE=1 SV=1
-----MSSSQLEQAITDLINLFHKYSG----SDDTIEKEDLLRLMKDNFPNFL
GACEKRGRDYLSNIFEKQDKNKDRKIDFSEFLSLLADIATDYHNHSHGAQLCSGGNQ---

>sp|Q14ST5|S10A7_HORSE Protein S100-A7 OS=Equus caballus GN=s100A7 PE=3 SV=1
-----MSETEAEASVIGIIELFHKYTGRDD----MIDKPGLLKMLQDNFPNFL
AACDKKGTDYLANVFEKKDKNRDCKIDFSEFLSLLGDIATDYHKQSHGAPACSEGDQ---

>sp|P31151|S10A7_HUMAN Protein S100-A7 OS=Homo sapiens GN=S100A7 PE=1 SV=4
-----MSNTQAERSIIGMIDMFHKYTRRDD----KIEKPSLLTMMKENFPNFL
SACDKKGTNYLADVFEKKDKNEDKKIDFSEFLSLLGDIATDYHKQSHGAAPCSGGSQ---

>sp|Q86SG5|S1A7A_HUMAN Protein S100-A7A OS=Homo sapiens GN=S100A7A PE=2 SV=3
-----MSNTQAERSIIGMIDMFHKYTGRDG----KIEKPSLLTMMKENFPNFL
SACDKKGIHYLATVFEKKDKNEDKKIDFSEFLSLLGDIAADYHKQSHGAAPCSGGSQ---