

Table 2 Summary of the protein distribution in some major subcellular locations in different protist species

Specie	Total	HLS	LS	Cyt	Plasm	mem	Mt		Nuc		Sec(%)
							non-m	mem	non-m	mem	
Alveolata; Apicomplexa											
<i>Babesia bigemina</i>	5227	379	116	1452	341	119	997	244	1697	7.3	
<i>Babesia bovis</i>	6268	730	178	1302	514	102	1015	71	2611	11.6	
<i>Cryptosporidium parvum</i>	6388	426	142	1011	387	168	504	168	3952	6.7	
<i>Eimeria acervulina</i>	6909	481	332	928	342	116	1249	125	2895	7.0	
<i>Eimeria brunetti</i>	8720	805	515	848	325	155	1365	271	3766	9.2	
<i>Eimeria maxima</i>	6132	420	264	883	303	124	1039	91	2686	6.8	
<i>Eimeria mitis</i>	10072	986	682	879	317	217	1502	360	4289	9.8	
<i>Eimeria necatrix</i>	8623	711	450	918	519	208	1762	221	3149	8.2	
<i>Eimeria praecox</i>	7642	683	508	670	246	136	1005	258	3693	8.9	
<i>Eimeria tenella</i>	9299	729	432	1185	482	174	2112	133	3543	7.8	
<i>Gregarina niphandrodes</i>	6342	316	169	1816	400	67	1161	29	2348	5.0	
<i>Hammondia hammondi</i>	8016	588	239	1123	764	179	1948	82	3024	7.3	
<i>Neospora caninum</i>	10101	730	362	1505	963	194	2281	116	3697	7.2	
<i>Plasmodium berghei</i>	15967	537	379	1173	404	754	2900	1024	8086	3.4	
<i>Plasmodium chabaudi</i>	20341	840	440	1833	450	816	3651	1221	10472	4.1	
<i>Plasmodium chabaudi chabaudi</i>	5539	507	144	467	176	229	562	594	3222	9.2	
<i>Plasmodium cynomolgi</i> strain B	5713	324	92	632	320	129	611	417	3525	5.7	
<i>Plasmodium falciparum</i> FCH/4	5762	206	99	440	179	246	590	605	3516	3.6	
<i>Plasmodium falciparum</i> IGH-CR14	5035	220	116	448	167	214	516	472	3028	4.4	
<i>Plasmodium falciparum</i> MaliPS096_E11	6301	271	130	452	228	281	781	651	3684	4.3	
<i>Plasmodium falciparum</i> NF135/5.C10	6324	266	146	458	222	331	832	603	3600	4.2	
<i>Plasmodium falciparum</i> Santa Lucia	6175	265	145	435	231	300	772	594	3584	4.3	
<i>Plasmodium falciparum</i> Tanzania	6699	259	137	493	235	317	803	649	3990	3.9	

Continuing Table 2

Specie	Total	HLS	LS	Cyt	Plasm	Mt		Nuc		Sec(%)
						mem	non-m	mem	non-m	
<i>Ichthyophthirius multifiliis</i>	8119	165	67	762	336	559	858	820	4771	2.0
<i>Oxytricha trifallax</i>	24577	770	205	1498	1631	452	1373	1742	17191	3.1
<i>Paramecium tetraurelia</i>	39936	1509	367	2569	1961	1304	3552	2207	27495	3.8
<i>Stylonychia lemnae</i>	20784	817	210	1379	1379	471	1289	1389	14206	3.9
<i>Tetrahymena thermophila</i>	27741	1541	454	1275	1336	1365	2481	2688	16630	5.6
Alveolata; Perkinsa										
<i>Perkinsus marinus</i>	23241	1406	415	6525	1823	234	4333	81	7927	6.0
Amoebozoa; Archamoebae										
<i>Entamoeba dispar</i>	8679	386	109	1349	431	362	657	237	5472	4.4
<i>Entamoeba histolytica</i> HM-1:IMSS-A	6315	281	70	845	370	244	416	165	4120	4.4
<i>Entamoeba histolytica</i> HM-1:IMSS-B	6292	269	67	902	363	229	415	160	4049	4.3
<i>Entamoeba histolytica</i> HM-3:IMSS	7331	339	90	1077	419	274	526	186	4656	4.6
<i>Entamoeba histolytica</i> KU27	7398	357	81	1157	424	265	560	185	4653	4.8
<i>Entamoeba invadens</i> IP1	9857	630	189	2323	550	217	901	352	5403	6.4
<i>Entamoeba nuttalli</i>	6223	283	80	891	366	240	434	149	4020	4.5
Amoebozoa; Discosea										
<i>Acanthamoeba castellanii</i> str. Neff	14944	952	291	3844	1160	197	2842	99	5162	6.4
Amoebozoa; Mycetozoa										
<i>Dictyostelium discoideum</i>	13125	719	188	1711	635	609	1246	416	7223	5.5
<i>Dictyostelium fasciculatum</i>	12210	729	249	1359	904	265	1163	363	7110	6.0
<i>Dictyostelium purpureum</i>	12353	783	227	1543	706	402	1091	501	7363	6.3
<i>Polysphondylium pallidum</i>	12451	812	216	1492	831	271	1193	358	7271	6.5
Apusozoa; Apusomonadidae										
<i>Thecamonas trahens</i> ATCC 50062	10606	500	311	3035	1497	119	2056	25	1949	4.7
Cryptophyta; Pyrenomonadales										

Continuing Table 2

Specie	Total	HLS	LS	Cyt	Plasm	Mt		Nuc		Sec(%)
						mem	non-m	mem	non-m	
Guillardia theta CCMP2712	24987	2268	679	4572	2017	310	4883	183	10082	9.1
Fornicata; Diplomonadida										
Giardia intestinalis	30589	735	539	7798	1798	226	5172	221	12528	2.4
Spironucleus salmonicida	8104	62	103	1175	398	214	1084	287	4853	0.8
Haptophyceae										
Emiliana huxleyi	36436	3111	1733	8517	3003	703	12655	66	5361	8.5
Chrysochromulina sp. CCMP291	16813	936	481	4937	1605	262	4857	36	3036	5.6
Heterolobosea; Schizopyrenida										
Naegleria gruberi	15736	675	204	1909	1362	323	1310	549	9619	4.3
Kinetoplastida; Bodonidae										
Bodo saltans	18292	1187	657	3009	2306	283	4502	87	5263	6.5
Kinetoplastida; Trypanosomatidae										
Angomonas deanei	14609	325	333	3921	1136	309	3169	148	5452	2.2
Leishmania braziliensis	8312	181	201	1727	765	212	2662	31	2312	2.2
Leishmania donovani	8797	247	210	1813	782	214	2748	37	2395	2.8
Leishmania infantum	8311	207	177	1685	800	209	2621	42	2264	2.5
Leishmania major	8426	224	220	1737	838	216	2663	40	2223	2.7
Leishmania mexicana	8239	192	181	1707	789	194	2583	43	2271	2.3
Leishmania panamensis	7754	160	175	1576	680	189	2489	38	2226	2.1
Leptomonas pyrrocoris	9298	222	225	1981	936	227	2783	54	2647	2.4
Leptomonas seymouri	8500	170	187	1680	778	205	2676	40	2546	2.0
Phytomonas sp. isolate EM1	6361	94	101	1263	488	126	1645	55	2482	1.5
Phytomonas sp. isolate Hart1	6442	112	98	1162	462	127	1636	74	2675	1.7
Strigomonas culicis	10048	295	286	2529	876	258	2814	64	2827	2.9
Trypanosoma brucei brucei	9381	726	312	1910	940	261	2567	41	2542	7.7

Continuing Table 2

Specie	Total	HLS	LS	Cyt	Plasm	Mt		Nuc		Sec(%)
						mem	non-m	mem	non-m	
<i>Trypanosoma brucei gambiense</i>	9786	408	322	1773	1142	411	2868	76	2598	4.2
<i>Trypanosoma congolense</i>	12883	1082	399	2546	1023	310	3876	69	3388	8.4
<i>Trypanosoma cruzi</i>	54882	4122	1765	11430	5395	1152	14339	305	13257	7.5
<i>Trypanosoma cruzi Dm28c</i>	11346	632	396	2016	1164	275	3426	70	2795	5.6
<i>Trypanosoma cruzi marinkellei</i>	10187	554	361	2293	1056	191	2493	62	2443	5.4
<i>Trypanosoma rangeli SC58</i>	7365	284	279	1615	735	167	2308	21	1733	3.9
<i>Trypanosoma vivax</i>	11624	1058	350	2137	835	305	3799	58	2950	9.1
Opisthokonta										
<i>Monosiga brevicollis</i>	9273	980	300	1792	910	174	1813	90	2762	10.6
<i>Salpingoeca rosetta</i>	11703	936	305	2127	938	176	2134	109	4376	8.0
<i>Fonticula alba</i>	6248	254	170	1014	519	130	1717	36	1702	4.1
<i>Capsaspora owczarzaki</i>	9926	525	357	1841	951	185	2134	78	3210	5.3
<i>Sphaeroforma arctica JP610</i>	18649	862	366	4572	1017	168	3335	89	8197	4.6
Parabasalia; Trichomonadida										
<i>Trichomonas vaginalis</i>	50709	399	732	12171	1618	603	4039	1250	33551	0.8
Rhizaria										
<i>Plasmodiophora brassicae</i>	9753	776	275	2048	1241	130	2290	34	2466	8.0
<i>Spongospora subterranea</i>	11127	569	342	1769	861	159	2203	62	4680	5.1
<i>Reticulomyxa filosa</i>	39924	626	720	4680	2900	988	3983	3808	23455	1.6
Rhodophyta										
<i>Cyanidioschyzon merolae</i>	5053	114	115	779	442	150	1884	40	1302	2.3
<i>Galdieria sulphuraria</i>	7333	174	151	1034	764	154	1557	109	3307	2.4
<i>Chondrus crispus</i>	9741	307	248	1869	546	238	3544	31	2678	3.2
Stramenopiles; Bacillariophyta										
<i>Thalassiosira oceanica</i>	34571	2331	921	7179	1402	326	8637	288	13269	6.7

Continuing Table 2

Specie	Total	HLS	LS	Cyt	Plasm	Mt		Nuc		Sec(%)
						mem	non-m	mem	non-m	
<i>Thalassiosira pseudonana</i>	11874	1335	348	2521	1063	147	1825	183	4404	11.2
<i>Phaeodactylum tricornutum</i>	10730	1214	417	2011	1147	177	2078	93	3305	11.3
Stramenopiles; Blastocystis										
<i>Blastocystis hominis</i>	5832	185	91	1304	411	101	944	81	2677	3.2
Stramenopiles; Eustigmatophyceae										
<i>Nannochloropsis gaditana</i>	15363	1263	619	2809	1317	333	5326	50	3305	8.2
Stramenopiles; Oomycetes										
<i>Albugo candida</i>	13241	608	335	1640	1040	208	2442	172	6902	4.6
<i>Albugo laibachii</i> Nc14	12983	395	273	1745	925	158	2719	180	6482	3.0
<i>Aphanomyces astaci</i>	25026	1434	579	4835	2619	321	5991	81	7843	5.7
<i>Aphanomyces invadans</i>	19594	869	445	4062	2254	271	4657	66	5945	4.4
<i>Hyaloperonospora arabidopsidis</i>	14228	837	387	2620	816	191	4206	62	5082	5.9
<i>Phytophthora infestans</i>	18516	1748	393	3868	1736	282	4015	92	6375	9.4
<i>Phytophthora parasitica</i> CJ01A1	26489	1835	475	4736	2275	302	5776	134	10687	6.9
<i>Phytophthora parasitica</i> P10297	26452	1782	455	4824	2249	326	5782	139	10638	6.7
<i>Phytophthora parasitica</i> P1569	26477	1824	471	4751	2268	322	5802	131	10660	6.9
<i>Phytophthora parasitica</i> P1976	26517	1825	452	4840	2237	305	5772	126	10686	6.9
<i>Phytophthora ramorum</i>	15595	1423	259	3561	1646	195	3132	78	4954	9.1
<i>Phytophthora sojae</i>	26502	2480	526	5571	2318	319	6360	112	8611	9.4
<i>Plasmopara halstedii</i>	15460	811	350	2721	1036	154	3711	102	6664	5.2
<i>Pythium ultimum</i> DAOM BR144	15153	892	278	3146	1745	170	2995	84	5523	5.9
<i>Saprolegnia diclina</i> VS20	18047	1178	466	3825	2586	279	4018	49	4508	6.5
<i>Saprolegnia parasitica</i>	20070	1290	518	4378	2670	317	4585	60	5091	6.4
Stramenopiles; Pelagophyceae										
<i>Aureococcus anophagefferens</i>	11519	1094	417	4073	949	140	2537	19	1645	9.5

Continuing Table 2

Specie	Total	HLS	LS	Cyt	Plasm	Mt mem	non-m	Nuc mem	non-m	Sec(%)
Stramenopiles; PX clade										
Ectocarpus siliculosus	16454	1205	454	4387	1310	259	4594	44	3737	7.3
Total	1970022	114788	45807	336720	150373	58519	370334	51070	810058	5.8

Note: Abbreviation: HLS: highly likely secreted; LS: likely secreted; Cyt: cytoplasm (or cytosol); Plasm: plasma membrane; Mt mem: mitochondrial membrane; Mt non-m: mitochondrial non-membrane; Nuc mem: nuclear membrane; Nuc non-m: nuclear non-membrane; Sec: secretome