

Table S1. *Sarcocystis aucheniae* proteins identified by immunoproteomics. The peptides identified in each of the selected immunoreactive bands are listed and characterized with respect to antigenicity, molecular weight, presence of signal peptide and/or transmembrane domains and homologous proteins in the coccidia *Toxoplasma gondii*, *Neospora caninum* and *Eimeria* sp.

Protein band	MS ID	Antigenicity index	MW (kDa)	Topology ¹		Main conserved domain	Genbank acc. number	Homologues		
				TMHMM	SignalP			<i>T. gondii</i>	<i>N. caninum</i>	<i>Eimeria</i> sp. ²
23 kDa	1	0.640261	116.5	0	Yes	Peptidase_M16_M	OR538339	XP_018636597	XP_003882147	XP_013233005
	3	0.625048	44.8	0	No	-	OR538333	XP_002371248	XP_003880749	-
	4	0.377111	126.1	9	No	E1-E2_ATPase	OR538364	XP_002369362	XP_003882467	XP_013230267
26 kDa	5	0.871654	30.1	0	No	superoxide dismutase	OR538365	XP_002364798	XP_003885488	XP_013232304
	6	0.820947	28.1	0	No	ubiquitin	OR538345	XP_002367193	XP_003886042	XP_013233776
	7	0.900926	44.3	0	No	HSP-70		same as MS50		
33 kDa	8	0.910398	35.6	0	No	PS decarboxylase		same as MS15		
	9	0.935031	30.5	0	No	14-3-3	OR538360	XP_002365409	XP_003882726	XP_01322953
	10	0.842163	34.7	0	No	PS decarboxylase		same as MS15		
	11	0.457649	18.2	0	No	proteasome	OR538346	XP_002370955	XP_003885582	XP_013228268
	12	0.354801	93.5	0	No	trypsin	OR538340	XP_002365392	XP_003882743	XP_013232558
	13	0.488969	56.2	0	No	serpin	OR538351	XP_002367021	XP_003885915	XP_013232835
	14	0.452299	23.1	0	No	PS decarboxylase		same as MS15		
	15	0.643096	113.8	1	No	PS decarboxylase	OR538353	XP_018636598	XP_003883917	XP_003883907
	16	0.763341	41.2	0	No	LCAT	OR538354	XP_002365875	XP_003883739	XP_013228817
	17	0.839857	92.9	0	No	elongation factor 2	OR538344	XP_002367778	XP_003882268	XP_013230121
	18	0.871646	31.8	0	No	TUDOR	OR538355	XP_002366497	XP_003881785	XP_013234110
	19	0.292976	35.8	0	No	lactate dehydrogenase	OR538363	XP_002368105	XP_003883478	XP_013227905
	20	0.919246	75.4	0	No	thioredoxin reductase	OR538357	XP_002364220	XP_003884987	XP_013234814
	21	0.910614	17.4	0	No	SAG	OR538335	XP_002365842	XP_003881692	-
	22	0.073894	232.9	0	No	SAG	OR538334	XP_002368595	XP_003881008	-
	23	0.894106	74.8	1	Yes	HSP-70	OR538348	XP_002364404	XP_003885152	XP_013228725
38 kDa	24	0.476742	36.9	0	No	GAPDH	OR538367	XP_018636414	XP_003881152	XP_013234039
	26	0.869894	45.7	0	No	fructose-1,6-bisphosphate aldolase	OR538361	XP_002368989	XP_003884639	XP_013233987
	27	0.554836	28.9	0	No	GAP45	OR538337	XP_013232774	XP_003884458	XP_013233112
73 kDa	29	0.695947	73.8	0	No	leucyl aminopeptidase	OR538341	XP_018636441	XP_003881232	XP_013230932
	31	0.659780	68.7	0	Yes	HSP-60	OR538347	XP_002367122	XP_003886122	XP_013233964
	32	0.451268	75.7	1	No	histidine acid phosphatase	OR538358	XP_002364164	XP_003884942	-

45 kDa	33	0.224609	15.5	0	No	SAG	same as MS22			
	35	0.468109	40.9	0	No	PS decarboxylase	same as MS8			
	36	0.360001	41.9	0	No	PS decarboxylase	same as MS8			
	37	0.788678	120.5	0	No	aminopeptidase	OR538342	XP_002366120	XP_003884424	XP_013228001
	38	0.570811	47.7	0	No	DnAK-TPR	OR538359	XP_002367488	XP_003882527	-
	40	0.740474	42.7	0	No	Peptidase_M16_M	same as MS1			
	43	0.928837	17.1	0	No	S9 prolyl oligopeptidase	OR538343	XP_002369249	XP_003881672	XP_013229688
	44	0.671182	16.5	0	No	-	OR538366	-	-	-
	48	0.926134	43.4	0	No	Microneme protein	OR538336	XP_002368836	XP_003882956	XP_013231935
	50	0.767948	31.8	0	No	HSP-70	OR538349	XP_002365977	XP_003883640	XP_013228725
	53	0.367677	11.4	0	No	fructose-1,6-bisphosphate aldolase	same as MS26			
	54	0.571094	42.8	0	No	fructose-1,6-bisphosphatase	OR538352	XP_018637277	XP_003882277	XP_013230653
	56	0.719983	16.8	0	No	GRA9	OR538338	-	-	XP_013246603
	57	0.583050	83.3	0	No	HSP-90	OR538350	XP_002368278	XP_003881046	XP_013232120
	58	0.759219	90.4	1	No	chromosome segregation protein	OR538356	XP_002365650	XP_003883933	-
	60	0.469385	48.4	0	No	enolase	OR538362	XP_002365578	XP_003884000	XP_013229351

¹ None of the identified proteins had a GPI anchor signal; ² All accession numbers for *Eimeria* sp. correspond to *E. tenella* with the exception of the homologue of protein 56 which was found in *E. acervulina*.