



Supplementary material of Apicortin, a Constituent of Apicomplexan Conoid/Apical Complex and Its Tentative Role in Pathogen–Host Interaction

Table S1. Apicortin in apicomplexan species.

Class/Subclass	Order/Suborder	Family	Genus	Species	Accession Number
Aconoidasida	Haemosporida	Haemoproteidae	<i>Haemoproteus</i>	<i>H. tartakovskyi</i>	GGWD01002623 ^a
		Plasmodiidae	<i>Hepatocystis</i>	<i>Hepatocystis</i> sp.	VWU48825
			<i>Plasmodium</i>	<i>P. falciparum</i>	XP_002808695
				<i>P. reichenowi</i>	SOV76822
				<i>P. gaboni</i>	XP_018643113
				<i>P. sp. gorilla clade</i>	XP_028537022
				<i>P. sp. DRC-Itaito</i>	SPJ09023
				<i>P. coatneyi</i>	XP_019915329
				<i>P. brasilianum</i>	MKLA02000337 ^{b,c}
				<i>P. cynomolgi</i>	XP_004222837
				<i>P. fragile</i>	XP_012336263
				<i>P. gonderi</i>	XP_028543969
				<i>P. inui</i>	XP_008815147
				<i>P. knowlesi</i>	CAA9988661
				<i>P. malariae</i>	XP_028862044
				<i>P. ovale</i>	SCQ16487
				<i>P. vivax</i>	VUZ96467
				<i>P. berghei</i>	XP_034423003
				<i>P. chabaudi</i>	XP_016654315
				<i>P. vinckei</i>	XP_008623567
				<i>P. yoelii</i>	XP_729403
				<i>P. gallinaceum</i>	XP_028530755
				<i>P. relictum</i>	XP_028533490
Nephromycida			<i>Cardiosporidium</i>	<i>C. cionae</i>	KAF8822549
			<i>Nephromyces</i>	<i>Nephromyces</i> sp.	GHIL01164954 ^a
Piroplasmida	Babesiidae	<i>Babesia</i>		<i>B. bigemina</i>	XP_012767358
				<i>B. bovis</i>	XP_001609847
				<i>B. divergens</i>	CCLB01000001 ^b
				<i>B. microti</i>	-
				<i>B. ovata</i>	XP_028867856
				<i>Babesia</i> sp.	XP_028871112
	Theileridae	<i>Theileria</i>	<i>T. annulata</i>		XP_952938

			<i>T. equi</i>	XP_004830792
			<i>T. orientalis</i>	PVC53896
			<i>T. parva</i>	EAN31621
Conoidasida/ Coccidia	Agamococcidiorida	Rhytidocystidae	<i>Rhytidocystis</i>	<i>Rhytidocystis</i> sp. ^f
				GHVS01057697 ^{a,e} GHVS01047420 ^{a,e}
	Eucoccidiorida/ Eimeriorina	Cryptosporidiidae	<i>Cryptosporidium</i>	<i>C. andersoni</i>
				OII78232
				<i>C. baileyi</i>
				JIBL01000123 ^b
				<i>C. bovis</i>
				VHIT01000034 ^b
				<i>C. cuniculus</i>
				PVQC01000007 ^b
				<i>C. felis</i>
				KAF7458849
				<i>C. hominis</i>
				OLQ16283
				<i>C. meleagridis</i>
				POM85076
				<i>C. muris</i>
				OLQ16283
				<i>C. parvum</i>
				XP_001388280
				<i>C. ryanae</i>
				VHLK01000036 ^b
				<i>C. sp. chipmunk</i>
				JXRN01000030 ^b
				<i>C. sp. 37763</i>
				SCFC01000030 ^b
				<i>C. tyzzeri</i>
				TRY51485
				<i>C. ubiquitum</i>
				XP_028876475
				<i>C. viatorum</i>
				QZWW01000032 ^b
	Eimeriidae	<i>Cyclospora</i>	<i>C. cayetanensis</i>	XP_026194446
			<i>Eimeria</i>	<i>E. acervulina</i>
				XP_013250787
				<i>E. brunetti</i>
				CDJ52911
				<i>E. falciformis</i>
				NPHX01000419 ^b
				<i>E. maxima</i>
				CBUY010002544 ^b CBUY010001829 ^b
				<i>E. mitis</i>
				XP_013356320
				<i>E. necatrix</i>
				XP_013434470
				<i>E. nieschulzi</i>
				JRZD01000823 ^b
				<i>E. praecox</i>
				CBUU010030987 ^b CBUU010036236 ^b
				<i>E. tenella</i>
				XP_013231224.
Sarcocystidae		<i>Besnoitia</i>	<i>B. besnoiti</i>	XP_029217437
		<i>Cystoisospora</i>	<i>C. suis</i>	PHJ23653
		<i>Hammondia</i>	<i>H. hammondi</i>	XP_008888750 ^d
		<i>Neospora</i>	<i>N. caninum</i>	XP_003883150
		<i>Sarcocystis</i>	<i>S. neurona</i>	JAQE01000498 ^b
		<i>Toxoplasma</i>	<i>T. gondii</i>	XP_002364910

Conoidasida/	Archigregarinorida	Selenidiidae	<i>Selenidium</i>	<i>S. pygospionis</i>	GHVN01000425 ^{a,e}
Gregarinasina			<i>Digyalum</i>	<i>D. oweni</i> ^g	GHVM01057186 ^{a,e}
	Eugregarinorida	Cephaloidophoridae	<i>Cephaloidophora</i>	<i>C. cf. communis</i>	GHVH01004777 ^{a,e}
		Gregarinidae	<i>Gregarina</i>	<i>G. niphandrodes</i>	XP_011128898
		Lecudinidae	<i>Ascogregarina</i>	<i>A. taiwanensis</i>	ABJQ01000568 ^b
			<i>Lankesteria</i>	<i>L. abbotti</i> ⁱ	HBHB01002866 ^{a,e}
Conoidasida	Protococcidiorida	Eleutheroschizonidae	<i>Eleutheroschizon</i>	<i>E. duboscqi</i>	GHVT01063535 ^a

The complete genomes of the species listed here have been sequenced (cf. <https://www.ncbi.nlm.nih.gov/genome>) except those of the species with grey background. Accession numbers are from the NCBI protein and nucleotide databases. Accession numbers with red background indicate that the sequence is incorrect in the NCBI protein database. Corrected sequences can be found in reference [1]. ^a–TSA (Transcriptome Shotgun Assembly); ^b–WGS (Whole Genome Shotgun); ^c – 100% identical with *P. malariae* XP_028862044; ^d – This record was removed. WGS: AVCM01036308; ^e – incomplete sequence; ^f – According to the new classification described in reference [2], *Rhytidocystis* sp. belongs to a new class ‘Marosporida’; ^g – According to the new classification described in reference [2], *Digyalum oweni* belongs to the class ‘Squirmidea’, which does not belong to Apicomplexa.

References

- Orosz, F. Wider than thought phylogenetic occurrence of apicortin, a characteristic protein of apicomplexan parasites. *J. Mol. Evol.* **2016**, *82*, 303–314, doi:10.1007/s00239-016-9749-5.
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