

Table S2: Localization of PVM candidate proteins in *P. berghei* and *P. falciparum* based on this work and published studies that used electron and/or fluorescence microscopy techniques for protein localization.

<i>P. berghei</i> ID	Product	<i>P. falciparum</i> ID	Localization(s) with Reference(s)
PBANKA_0311700	rhoptry neck protein 6, putative	PF3D7_0214900	Pf: rhoptry neck, PV (1)
PBANKA_0411700	co-chaperone p23, putative	PF3D7_0314000	Pf: cytoplasmic (2)
PBANKA_0623100	tryptophan-rich protein	none	Pb: exported (3)
PBANKA_0304800	serine repeat antigen 4	PF3D7_0207400*	
PBANKA_1008500	translocon component PTEX150	PF3D7_1436300	Pb: PV/PVM (4), Pf: PVM (5)
PBANKA_0830200	high molecular weight rhoptry protein 2	PF3D7_0929400	Pf: rhoptries/PVM (6)
PBANKA_0305100	serine repeat antigen 1	PF3D7_0207700*	Pb: PVM in LS (7), Pf: PV (8)
PBANKA_0931300	dipeptidyl aminopeptidase 1, putative	PF3D7_1116700	Pf: food vacuole/PV (9)
PBANKA_1212500	conserved Plasmodium protein, unknown function	PF3D7_1014100	
PBANKA_0509000	conserved Plasmodium protein, unknown function	PF3D7_1024800	Pb: diffuse cytoplasmic in BS, PVM in LS (this study), Pf: PVM (10, 11)
PBANKA_1002600	6-cysteine protein	PF3D7_0404900	Pf: merozoite surface (12)
PBANKA_0919100	parasitophorous vacuolar protein 1, putative	PF3D7_1129100	Pf: PV (10)
PBANKA_1035200	LCCL domain-containing protein	PF3D7_1407000	Pb: cytoplasmic in GM (13), Pf: PPM of GM (14)
PBANKA_0305000	serine repeat antigen 2	PF3D7_0207600*	Pb: PVM/internal structures in LS (7), Pf: PV (15)
PBANKA_1443300	merozoite surface protein 9, putative	PF3D7_1228600	Pf: merozoite surface, PV (16)
PBANKA_0931200	heat shock protein 101	PF3D7_1116800	Pb: PV/PVM (4), Pf: PVM (5)
PBANKA_0618600	conserved Plasmodium protein, unknown function	PF3D7_0721100	
PBANKA_1349000	MSP7-like protein	PF3D7_1335000	Pf: trophozoite surface (17)
PBANKA_1365500	exported protein IBIS1	none	Pb: PVM in LS, membranous structures in RBC cytoplasm (18)
PBANKA_0100500	PIR protein	none	
PBANKA_0941300	translocon component PTEX88	PF3D7_1105600	Pb: PV/PVM, Pf: PVM (4)
PBANKA_1229000	Plasmodium exported protein (PHIST), unknown function	None	Pb: exported in BS, PV in LS (18, this study)
PBANKA_0517000	early transcribed membrane protein	PF3D7_1033200*	Pf: PVM (19)
PBANKA_1328000	serine/threonine protein phosphatase UIS2	PF3D7_1464600	Pb: PVM in BS and LS (this study), Pf: PVM (11)
PBANKA_0519300	conserved Plasmodium protein, unknown function	none	Pb: PV/PVM in BS, PVM in LS (this study)

PBANKA_0311800	acyl-CoA synthetase, putative	PF3D7_0215300	
PBANKA_1349200	MSP7-like protein	PF3D7_1334400	Pf: trophozoite surface (17)
PBANKA_0519200	conserved Plasmodium protein, unknown function	none	Pb: PPM/PV in BS and LS (this study)
PBANKA_0519000	S-antigen, putative	PF3D7_1035200*	Pf: PV (20)
PBANKA_1441700	conserved Plasmodium protein, unknown function	PF3D7_1226900	Pf: PV, PVM (10, 11)
PBANKA_0924800	conserved Plasmodium protein, unknown function	PF3D7_1123500	Pb: one focus per parasite in BS and LS (this study), Pf: peripheral/foci within parasite (11)
PBANKA_1030600	p1/s1 nuclease, putative	PF3D7_1411900, PF3D7_1412000	
PBANKA_0519100	conserved Plasmodium protein, unknown function	none	
PBANKA_1300700	LCCL domain-containing protein	PF3D7_1475500	Pb: punctate cytoplasmic pattern in GM (21), Pf: PPM in GM (14)
PBANKA_0416000	high molecular weight rhoptry protein 3, putative	PF3D7_0905400	Pf: rhoptries (22)
PBANKA_1418300	golgi protein 1, putative	PF3D7_1320000	Pb: rhoptries (23), Pf: Golgi apparatus (24)
PBANKA_0204500	LCCL domain-containing protein	PF3D7_0109100	Pb: punctate cytoplasmic pattern in GM (21), poles of GM (25)
PBANKA_1032100	rhoptry-associated protein 1	PF3D7_1410400	Pf: rhoptries/PV (26)
PBANKA_0209200	parasite-infected erythrocyte surface protein	PF3D7_0103900	
PBANKA_0304900	serine repeat antigen 3	PF3D7_0207500*	Pb: PVM/cytoplasmic in LS (27), Pf: PV/PVM (28)
PBANKA_1037300	conserved Plasmodium protein, unknown function	PF3D7_1404900	Pb: cytoplasmic (13)
PBANKA_1316300	conserved Plasmodium protein, unknown function	PF3D7_1452600	
PBANKA_0201600	early transcribed membrane protein	none	
PBANKA_0623300	tryptophan-rich protein	none	
PBANKA_0216761	reticulocyte binding protein, putative	none	
PBANKA_1334300	exported protein 2	PF3D7_1471100	Pb: PV/PVM (4), Pf: PVM (29)
PBANKA_1200600	Plasmodium exported protein, unknown function	none	Pb: cytoplasmic (3)
PBANKA_1358000	thioredoxin 2	PF3D7_1345100	Pb: partial PV/PVM and internal structures (4)
PBANKA_0702800	protein disulfide isomerase	PF3D7_0827900	
PBANKA_1400600	cytoadherence linked asexual protein, putative	none	Pb: rhoptries (3)
PBANKA_1107100	subtilisin-like protease 1	PF3D7_0507500	Pb: (30, 31) punctate pattern in BS and LS, Pf: exonemes/PV (32)
PBANKA_1437300	endoplasmin, putative	PF3D7_1222300	Pf: ER (33)
PBANKA_0519400	conserved Plasmodium protein, unknown function	none	Pb: PV in BS and LS (this study)

PBANKA_1101400	rhoptry-associated protein 2/3	none	Pb: rhoptries (23)
PBANKA_1315700	rhoptry neck protein 2	PF3D7_1452000	Pb: rhoptries (23), Pf: rhoptries (34)
PBANKA_0942500	thioredoxin, putative	PF3D7_1104400	
PBANKA_0300600	Plasmodium exported protein, unknown function	none	Pb: vesicular localization in GM (13)
PBANKA_0701100	conserved Plasmodium protein, unknown function	none	
PBANKA_0820000	DnaJ protein, putative	PF3D7_0919100	
PBANKA_0100700	Plasmodium exported protein, unknown function	none	
PBANKA_1425900	conserved Plasmodium protein, unknown function	PF3D7_0811600	

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