

Table S1 Table of the human proteins identified by mass spectrometry of purified Maurer's clefts

Accession	Protein name	Number of significant ms/ms spectra			
		Expt. 1		Expt. 2	
		MCs	3D7	MCs	3D7
sp P09525 ANXA4_HUMAN	Annexin A4	18	0	26	1
sp P50995 ANX11_HUMAN	Annexin A11	15	0	18	0
sp O75131 CPNE3_HUMAN	Copine-3	9	0	11	0
sp Q15173 2A5B_HUMAN	Serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit beta isoform	9	0	10	0
sp Q08AM6 VAC14_HUMAN	Protein VAC14 homolog	7	0	12	0
sp P53396 ACLY_HUMAN	ATP-citrate synthase	6	0	12	1
sp Q96FJ2 DYL2_HUMAN	Dynein light chain 2, cytoplasmic	3	0	3	0
sp B2RUZ4 SMIM1_HUMAN	Small integral membrane protein 1	2	0	2	0
sp O15400 STX7_HUMAN	Syntaxin-7	2	0	3	0
sp Q99816 TS101_HUMAN	Tumor susceptibility gene 101 protein	2	0	6	0
sp Q9UK41 VPS28_HUMAN	Vacuolar protein sorting-associated protein 28 homolog	2	0	4	0

Table S2. Proteins identified by LC-MS/MS analysis of MAHRP1-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		MAHRP1	3D7	MAHRP1	3D7
PF3D7_1370300	membrane associated histidine-rich protein (MAHRP1)	8	0	11	0
PF3D7_0818200	14-3-3 protein (14-3-3I)	8	1	8	1
PF3D7_1301700	Plasmodium exported protein (hyp8), unknown function (GEXP07)	8	0	9	0
PF3D7_0501200	parasite-infected erythrocyte surface protein (PIESP2)	4	0	10	0
PF3D7_0501000	Plasmodium exported protein, unknown function	2	0	4	0
PF3D7_0113900	Plasmodium exported protein (hyp8), unknown function (GEXP10)	2	0	6	0
PF3D7_1424100	60S ribosomal protein L5, putative	2	0	5	0

Table S3. Proteins identified by LC-MS/MS analysis of VCAP1-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		VCAP1	3D7	VCAP1	3D7
PF3D7_1301700	Plasmodium exported protein (hyp8), unknown function (GEXP07)	20	0	10	0
PF3D7_0706000	importin-7, putative	18	0	10	0
PF3D7_1116800	heat shock protein 101 (HSP101)	15	0	2	0
PF3D7_1436300	translocon component PTEX150 (PTEX150)	12	0	4	0
PF3D7_0113900	Plasmodium exported protein (hyp8), unknown function (GEXP10)	7	0	4	0
PF3D7_1370300	membrane associated histidine-rich protein (MAHRP1)	6	0	5	0
PF3D7_0501000	Plasmodium exported protein, unknown function	4	0	4	0
PF3D7_1149000	antigen 332, DBL-like protein (Pf332)	6	0	3	0
PF3D7_0524000	karyopherin beta (KASbeta)	3	0	3	0
PF3D7_1240900	erythrocyte membrane protein 1, PfEMP1 (VAR)	7	0	3	0
PF3D7_1002900	conserved Plasmodium protein, unknown function	2	0	2	0
PF3D7_1346100	protein transport protein SEC61 subunit alpha (SEC61)	2	0	4	0
PF3D7_1456800	V-type H(+)-translocating pyrophosphatase, putative (VP1)	2	0	2	0

Table S4. Proteins identified by LC-MS/MS analysis of GEXP10-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		GEXP10	3D7	GEXP10	3D7
PF3D7_0113900	Plasmodium exported protein (hyp8), unknown function (GEXP10)	21	0	17	0
PF3D7_1301700	Plasmodium exported protein (hyp8), unknown function (GEXP07)	8	0	5	0
PF3D7_0501200	parasite-infected erythrocyte surface protein (PIESP2)	10	0	3	0
PF3D7_0501000	Plasmodium exported protein, unknown function	3	0	2	0
PF3D7_1370300	membrane associated histidine-rich protein (MAHRP1)	4	0	3	0

Table S5. Proteins identified by LC-MS/MS analysis of REX1-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		REX1	3D7	REX1	3D7
PF3D7_0935900	ring-exported protein 1 (REX1)	127	0	91	0
PF3D7_1318800	translocation protein SEC63 (SEC63)	47	0	31	0
PF3D7_0600200	erythrocyte membrane protein 1, PfEMP1 (VAR)	16	0	34	0
PF3D7_0632500	erythrocyte membrane protein 1, PfEMP1 (VAR)	6	0	18	0
PF3D7_0705500	inositol-phosphate phosphatase, putative	6	0	10	0
PF3D7_1412500	actin II (ACT2)	6	0	5	0
PF3D7_1100100	erythrocyte membrane protein 1, PfEMP1 (VAR)	3	0	2	0
PF3D7_0927100	conserved Plasmodium protein, unknown function	2	0	2	0
PF3D7_1200400	erythrocyte membrane protein 1, PfEMP1 (VAR)	2	0	2	0
PF3D7_1353200	membrane associated histidine-rich protein (MAHRP2)	2	0	3	0

Table S6. Proteins identified by LC-MS/MS analysis of PTP5-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		PTP5	3D7	PTP5	3D7
PF3D7_1002100	EMP1-trafficking protein (PTP5)	27	2	53	0
PF3D7_0935900	ring-exported protein 1 (REX1)	14	0	10	0
PF3D7_1001900	Plasmodium exported protein (hyp16), unknown function (PfJ23)	9	0	10	0
PF3D7_0524000	karyopherin beta (KASbeta)	5	0	5	0
PF3D7_0721100	conserved Plasmodium protein, unknown function	5	0	4	0
PF3D7_0501200	parasite-infected erythrocyte surface protein (PIESP2)	2	0	3	0

Table S7. Proteins identified by LC-MS/MS analysis of PF3D7_1353100 -GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		PF3D7_13 53100	3D7	PF3D7_13 53100	3D7
PF3D7_0524000	karyopherin beta (KASbeta)	42	0	29	0
PF3D7_1353100	Plasmodium exported protein, unknown function	26	0	21	0
PF3D7_0706000	importin-7, putative	23	0	7	0
PF3D7_1246200	actin I (ACT1)	23	4	3	0
PF3D7_0815200	importin beta, putative	9	0	3	0
PF3D7_0422400	40S ribosomal protein S19 (RPS19)	7	1	2	0
PF3D7_0628300	choline/ethanolaminephosphotransferase, putative (CEPT)	4	0	6	0
PF3D7_1038000.1	antigen UB05	3	0	2	0
PF3D7_1353200	membrane associated histidine-rich protein (MAHRP2)	3	0	3	0

Table S8. Proteins identified by LC-MS/MS analysis of PTP6-GFP co-IP

PlasmoDB ID	Protein name	Number of significant ms/ms spectra			
		Experiment 1		Experiment 2	
		PTP6	3D7	PTP6	3D7
PF3D7_1302000	EMP1-trafficking protein (PTP6)	22	0	26	0
PF3D7_0702500	Plasmodium exported protein, unknown function	12	0	4	0
PF3D7_0500800	mature parasite-infected erythrocyte surface antigen (MESA)	9	0	4	0
PF3D7_0301700	Plasmodium exported protein, unknown function	8	0	7	0
PF3D7_0702300	sporozoite threonine and asparagine-rich protein (STARP)	8	0	10	0
PF3D7_1002000	Plasmodium exported protein (hyp2), unknown function	7	0	13	0
PF3D7_0109900.1	unspecified product	2	0	2	0
PF3D7_1221900	conserved Plasmodium membrane protein, unknown function	2	0	2	0

Table S9. Primers used in this study

Primer name	Enzyme site	Sequence 5' – 3'
PTP6-FOR	Xho	CTCGAGATGGTAGTGCTATATAATAATAAGG-3'
PTP6-REV	KpnI	GGTACCGGACGTTTTAGTAACATTTG-3'
PTP5-FOR	Xho	CTCGAGATGGAAAACATAATAACAAG-3'
PTP5-REV	KpnI	GGTACCTTTTAATTTCTTTTGAGATCTAC-3'
MAHRP1-FOR	XhoI	CTCGAGATGGCAGAGCAAGCAG-3'
MAHRP1-REV	KpnI	GGTACCATTATCTTTTTTTCTTGTTCTAA-3'
GEXP07-FOR	Xho	CTCGAGATGTCCTTTTGTTACGTTAGAAC-3'
GEXP07-REV	KpnI	GGTACCAAATTAGAACTTGTTAATGATTC-3'
GEXP10-FOR	Xho	CTCGAGATGAACATTTATATTAGGACC-3'
GEXP10-REV	KpnI	GGTACCTTGAAAATGTAATATTTGTCTTAAT-3'
PF3D7_1353100 -FOR	Xho	CTCGAGATGAAGACATACAATTCTT-3'
PF3D7_1353100 -REV	KpnI	GGTACCAGCTTCAACTACTTCTTC-3'
VCAP1-HR1-FOR	AvrII	CAGGCGCCAG CTAGGG TCCTTTTGTTACGTTAGAACA
VCAP1-HR1-REV	NcoI	ATCGATAACT CCATGGG GTTCTGGTTTAGCTGGT
VCAP1-HR2-FOR	SpeI	AGATCTTCGG ACTAGT GGTATGGCATTATTATTTGTCC
VCAP1-HR2-REV	SacII	CAATGGCCCCTTT CCGCGG CTTTTTTTGGAGAATAACATTTTAC TAAGTATATAATATTATTGCAGGAGTTGGTGCTCTGTTTTAGAGCTAGA A
VCAP1 guide TOP		TTCTAGCTCTAAAACAGAGCACCAACTCCTGCAATAATATTATATACTT A
VCAP1 guide BOTTOM		TTCTAGCTCTAAAACAGAGCACCAACTCCTGCAATAATATTATATACTT A
VCAP1 Knockout Scr FOR		CTAACGGTGTTTTAATAAATATTAACAACATCC
VCAP1 Knockout Scr REV		TTACTCTTCAACTTATTAAGTTTAATAGG
Knockout-CAM FOR		CTCTTAGAAAAAATATTGTAT
Knockout-HRP Rev		CAATATGAACATAAAGTACAA
yDHODH REV		TTAGCTTATGTCAACTCTATCAATAG
yDHODH FOR		ATGTTCAAATGCATCCTTAC