APPENDIX B: SUPPLEMENTARY TABLES

Supplementary Table A: *P. vivax* Sal 1 reference annotation changes based on RNA-Seq data

gene_id[a]	date	type	details
PVX_000015	01/12/2012	exon	added exon 1
PVX_000530	01/12/2012	exon	deleted intron 9*
PVX_000580	29/11/2012	exon	changed coordinates of exon 2, added exon 10
PVX_000604	29/11/2012	exon	changed coordinates of exon 5
PVX_000650	29/04/2013	exon	deleted intron 4
PVX_000660	29/11/2012	exon	changed coordinates of exon 3
PVX_000825	29/11/2012	exon	changed coordinates of exon 1
PVX_000900	29/11/2012	exon	added exon 5, changed coordinates of exon 6
PVX_001100	06/12/2012	exon	extended exon 2, added exon 1
PVX_001105	06/12/2012	exon	extended exon 2, added exon 1
PVX_001615	29/04/2013	exon	added exon 1
PVX_001630	07/12/2012	exon	added intron 1
PVX_001700	02/12/2012	exon	added exon 1, extended exon 2
PVX_001783	05/12/2012	exon	changed coordinates of exon 1
PVX_001840	30/11/2012	exon	changed coordinates of exon 10
PVX_002485	23/12/2012	exon	added exon 4
PVX_002485	29/11/2012	exon	changed coordinates of exon 2
PVX_002507	01/12/2012	exon	added exon 1, extended exon 2
PVX_002745	23/12/2012	exon	added exon 10
PVX_002855	21/04/2013	exon	changed coordinates of exon 1
PVX_002865	29/11/2012	exon	changed coordinates of exon 2
PVX_002930	29/11/2012	exon	changed coordinates of exon 2
PVX_003487	21/04/2013	exon	changed coordinates of exon 2
PVX_003550	08/10/2013	exon	changed coordinates of exon 1*
PVX_003555	01/12/2012	exon	changed coordinates of exon 1
PVX_003580	29/11/2012	exon	added exon 1*
PVX_003685	06/12/2012	exon	added exon 1, 2*
PVX_003750	21/04/2013	exon	changed coordinates of exon 2
PVX_003795	29/11/2012	exon	changed coordinates of exon 2
PVX_003810	29/11/2012	exon	changed coordinates of exon 2
PVX_003825	29/11/2012	exon	changed coordinates of exon 2
PVX_003840	29/11/2012	exon	changed coordinates of exon 2
PVX_003845	23/12/2012	exon	changed coordinates of exon 2
PVX_003915	29/11/2012	exon	changed coordinates of exon 6
PVX_004530	21/04/2013	exon	changed coordinates of exon 1
PVX_004530	30/11/2012	exon	changed coordinates of exon 2

PVX_004537	30/11/2012	exon	added exon 3
PVX_005040	30/11/2012	exon	added exon 2*
PVX_005058	05/12/2012	exon	added intron 2
PVX_079740	01/12/2012	exon	changed coordinates of exon 3
PVX_079785	01/12/2012	exon	changed coordinates of exon 4
PVX_079825	28/12/2012	exon	added exon 10
PVX_079860	28/12/2012	exon	added exon 11
PVX_079860	01/12/2012	exon	changed coordinates of exon 6
PVX_079895	29/12/2012	exon	changed coordinates of exon 1*
PVX_080055	01/12/2012	exon	changed coordinates of exon 2
PVX_080115	29/12/2012	exon	changed coordinates of exon 4
PVX_080125	29/12/2012	exon	changed coordinates of exon 2
PVX_080130	01/12/2012	exon	changed coordinates of exon 2
PVX_080147	08/12/2012	exon	changed coordinates of exon 4*
PVX_080150	29/12/2012	exon	added exon 6
PVX_080150	05/12/2012	exon	changed coordinates of exon 2*
PVX_080255	01/12/2012	exon	changed coordinates of exon 2
PVX_080305	05/12/2012	exon	added exon 7, changed coordinates of exon 6
PVX_080345	01/12/2012	exon	changed coordinates of exon 2
PVX_080475	01/12/2012	exon	changed coordinates of exon 5
PVX_080617	01/12/2012	exon	changed coordinates of exon 3, 8*
PVX_080670	01/12/2012	exon	changed coordinates of exon 2
PVX_080690	01/12/2012	exon	added exon 8
PVX_081250	29/11/2012	exon	changed coordinates of exon 2
PVX_081275	29/11/2012	exon	changed coordinates of exon 1
PVX_081360	29/11/2012	exon	extended exon 1
PVX_081410	29/11/2012	exon	changed coordinates of exon 4, 5*
PVX_081490	29/11/2012	exon	changed coordinates of exon 2
PVX_081605	29/11/2012	exon	changed coordinates of exon 5
PVX_081835	01/12/2012	exon	added exon 1
PVX_081840	23/12/2012	exon	changed coordinates of exon 3
PVX_081847	29/11/2012	exon	changed coordinates of exon 2
PVX_082360	01/12/2012	exon	changed coordinates of exon 2
PVX_082380	01/12/2012	exon	added exon 8
PVX_082830	01/12/2012	exon	changed coordinates of exon 17
PVX_082835	01/12/2012	exon	changed coordinates of exon 1
PVX_083110	22/04/2013	exon	changed coordinates of exon 1
PVX_083335	19/12/2012	exon	added exon 5
PVX_083345	01/12/2012	exon	added exon 9
PVX_083350	22/04/2013	exon	changed coordinates of exon 1
PVX_083370	12/12/2012	exon	added exon 2

PVX_083545	12/12/2012	exon	added exon 1
PVX_083575	22/04/2013	exon	changed coordinates of exon 2*
PVX_084120	02/01/2013	exon	added exon 1*
PVX_084130	03/12/2012	exon	changed coordinates of exon 3
PVX_084440	03/12/2012	exon	changed coordinates of exon 1*
PVX_084515	02/01/2013	exon	changed coordinates of exon 6, added exon 7*
PVX_084525	03/12/2012	exon	changed coordinates of exon 1
PVX_084925	03/12/2012	exon	changed coordinates of exon 10
PVX_084935	03/12/2012	exon	changed coordinates of exon 1
PVX_085005	03/12/2012	exon	changed coordinates of exon 1
PVX_085115	03/12/2012	exon	changed coordinates of exon 1
PVX_085375	05/12/2012	exon	changed coordinates of exon 1*
PVX_085410	02/01/2013	exon	changed coordinates of exon 1
PVX_085415	09/12/2012	exon	added exon 2
PVX_085500	02/01/2013	exon	changed coordinates of exon 9
PVX_085585	03/12/2012	exon	deleted exon 2
PVX_085905	03/12/2012	exon	changed coordinates of exon 1
PVX_085910	02/01/2013	exon	added exon 1
PVX_085977	14/12/2012	exon	added exon 1*
PVX_086030	03/12/2012	exon	changed coordinates of exon 4
PVX_086135	02/01/2013	exon	changed coordinates of exon 7*
PVX_086205	02/01/2013	exon	changed coordinates of exon 18
PVX_086205	03/12/2012	exon	changed coordinates of exon 7, 8*
PVX_086280	09/12/2012	exon	added exon 1, 2, 3*
PVX_086330	03/12/2012	exon	changed coordinates of exon 7
PVX_086860	30/11/2012	exon	changed coordinates of exon 1
PVX_086870	30/11/2012	exon	changed coordinates of exon 1
PVX_086930	30/11/2012	exon	changed coordinates of exon 1
PVX_086940	27/01/2013	exon	added exon 1*
PVX_086945	30/11/2012	exon	changed coordinates of exon 1
PVX_086985	24/12/2012	exon	changed coordinates of exon 2
PVX_087080	07/12/2012	exon	added exon 5, 6, 7*
PVX_087105	05/12/2012	exon	changed coordinates of exon 2*
PVX_087855	06/12/2012	exon	added exon 2, shortened exon 1
PVX_088035	29/11/2012	exon	changed coordinates of exon 2
PVX_088165	22/12/2012	exon	added exon 5
PVX_088205	06/12/2012	exon	added exon 1
PVX_088240	29/11/2012	exon	changed coordinates of exon 9
PVX_088250	06/12/2012	exon	added exon 2
PVX_088805	30/11/2012	exon	changed coordinates of exon 1
PVX_088805	21/04/2013	exon	changed coordinates of exon 3*

PVX_088810	01/12/2012	exon	added exon 1
PVX_088845	03/12/2012	exon	added exon 1, extended exon 2
PVX_088975	05/12/2012	exon	changed coordinates of exon 1*
PVX_089020	10/12/2012	exon	added exon 1
PVX_089360	30/11/2012	exon	extended exon 1
PVX_089410	30/11/2012	exon	changed coordinates of exon 1
PVX_089460	21/04/2013	exon	changed coordiantes of exon 1
PVX_089470	30/11/2012	exon	changed coordinates of exon 1
PVX_089473	23/12/2012	exon	changed coordinates of exon 1*
PVX_089475	23/12/2012	exon	changed coordinates of exon 1*
PVX_089500	30/11/2012	exon	changed coordinates of exon 3, added exon 5
PVX_089592	23/12/2012	exon	changed coordinates of exon 1
PVX_089700	30/11/2012	exon	changed coordinates of exon 3
PVX_089720	05/12/2012	exon	changed coordinates of exon 1*
PVX_089852	23/12/2012	exon	changed coordinates of exon 1*
PVX_089910	30/11/2012	exon	changed coordinates of exon 1
PVX_090270	02/12/2012	exon	exteneded exon 2, added exon 1
PVX_090330	03/12/2012	exon	deleted exon 3, added exon 1
PVX_090335	30/11/2012	exon	changed coordinates of exon 2
PVX_090940	30/11/2012	exon	changed coordinates of exon 8, added exon 12
PVX_091000	27/12/2012	exon	added exon 3
PVX_091136	30/11/2012	exon	changed coordinates of exon 2
PVX_091140	30/11/2012	exon	changed coordinates of exon 5
PVX_091430	30/11/2012	exon	changed coordinates of exon 10
PVX_091570	30/11/2012	exon	added exon 2, 3, 17*
PVX_091580	30/11/2012	exon	changed coordinates of exon 4
PVX_091610	30/11/2012	exon	changed coordinates of exon 1*
PVX_091660	10/01/2013	exon	added exon 1*
PVX_091750	30/11/2012	exon	changed coordinates of exon 10
PVX_091905	03/01/2013	exon	changed coordinates of exon 6*
PVX_092005	30/11/2012	exon	added exon 2
PVX_092035	07/12/2012	exon	deleted intron 2*
PVX_092135	30/11/2012	exon	changed coordinates of exon 3
PVX_092190	03/01/2013	exon	changed coordinates of exon 4
PVX_092330	07/12/2012	exon	added exon 1
PVX_092360	07/12/2012	exon	changed coordinates of exon 4, added exon 6
PVX_092370	30/11/2012	exon	changed coordinates of exon 1
PVX_092415	10/01/2013	exon	added exon 1*
PVX_092475	22/04/2013	exon	changed coordinates of exon 1
PVX_092490	05/12/2012	exon	changed coordinates of exon 1*
PVX_092670	30/11/2012	exon	changed coordinates of exon 1

PVX_092680	07/12/2012	exon	added exon 2
PVX_092680	30/11/2012	exon	added exon 2*
PVX_092790	30/11/2012	exon	changed coordinates of exon 2*
PVX_092855	05/12/2012	exon	deleted exon 2, changed coordinates of exon 1, 2*
PVX_092925	01/12/2012	exon	changed coordinates of exon 1
PVX_092930	22/04/2013	exon	changed coordinates of exon 2
PVX_093710	29/11/2012	exon	changed coordinates of exon 2*
PVX_093715	29/11/2012	exon	added exon 4, changed coordinates of exon 1, 2*
PVX_094240	30/11/2012	exon	changed coordinates of exon 1
PVX_094240	30/11/2012	exon	changed coordinates of exon 3
PVX_094243	30/11/2012	exon	added exon 3*
PVX_094245	30/11/2012	exon	deleted intron 2
PVX_094250	30/11/2012	exon	changed coordinates of exon 1
PVX_094255	24/12/2012	exon	changed coordinates of exon 1*
PVX_094260	16/12/2012	exon	added exon 2, extended exon 1*
PVX_094425	30/11/2012	exon	changed coordinates of exon 5
PVX_094540	11/12/2012	exon	added exon 8
PVX_094820	30/11/2012	exon	changed coordinates of exon 2
PVX_094890	30/11/2012	exon	changed coordinates of exon 6
PVX_094905	07/01/2013	exon	added exon 5
PVX_095035	09/04/2014	exon	added exon 2
PVX_095095	30/11/2012	exon	changed coordinates of exon 1
PVX_095125	30/11/2012	exon	added exon 3, 10*
PVX_095125	22/04/2013	exon	changed coordinates of exon 6
PVX_095140	30/11/2012	exon	changed coordinates of exon 3
PVX_095165	07/12/2012	exon	added exon 3*
PVX_095315	05/12/2012	exon	changed coordinates of exon 1*
PVX_095405	30/11/2012	exon	changed coordinates of exon 4
PVX_095475	07/12/2012	exon	deleted intron*
PVX_095495	30/11/2012	exon	changed coordinates of exon 1
PVX_095990	29/11/2012	exon	changed coordinates of exon 1
PVX_096010	04/12/2012	exon	changed coordinates of exon 1
PVX_096045	10/12/2012	exon	added exon 1, changed coordinates of exon 2
PVX_096060	06/12/2012	exon	added exon 2
PVX_096065	04/12/2012	exon	changed coordinates of exon 1*
PVX_096195	29/11/2012	exon	changed coordinates of exon 4
PVX_096395	23/12/2012	exon	added exon 1*
PVX_096920	26/04/2013	exon	added exon 1
PVX_096920	29/11/2012	exon	changed coordinates of exon 1*
PVX_096930	10/12/2012	exon	added exon 1, changed coordinates of exon 3
PVX_097530	01/12/2012	exon	added exon 1

PVX_097540	01/12/2012	exon	changed coordinates of exon 2*
PVX_097557	01/12/2012	exon	changed coordinates of exon 1
PVX_097580	01/12/2012	exon	added exon 1
PVX_097585	01/12/2012	exon	added exon 1, extended exon 2
PVX_097787	01/12/2012	exon	changed coordinates of exon 2*
PVX_097890	29/12/2012	exon	added exon 2
PVX_098045	01/12/2012	exon	changed coordinates of exon 5*
PVX_098582	16/12/2012	exon	added exon 1
PVX_098625	07/12/2012	exon	added exon 4*
PVX_098660	21/04/2013	exon	changed coordinates of exon 9
PVX_098690	11/12/2012	exon	added exon 3
PVX_098725	30/11/2012	exon	changed coordinates of exon 9
PVX_098820	30/11/2012	exon	changed coordinates of exon 3
PVX_099015	30/11/2012	exon	changed coordinates of exon 4
PVX_099065	24/12/2012	exon	changed coordinates of exon 1
PVX_099385	30/11/2012	exon	changed coordinates of exon 2
PVX_099470	24/12/2012	exon	added exon 3*
PVX_099475	07/12/2012	exon	added exon 3, 4*
PVX_099530	11/12/2012	exon	added exon 4*
PVX_099635	30/11/2012	exon	changed coordinates of exon 1
PVX_099665	30/11/2012	exon	changed coordinates of exon 1, 2*
PVX_099740	30/11/2012	exon	changed coordinates of exon 7
PVX_099800	24/12/2012	exon	changed coordinates of exon 4
PVX_099915	07/12/2012	exon	added exon 1*
PVX_099970	24/12/2012	exon	changed coordinates of exon 3
PVX_100005	24/12/2012	exon	added exon 3
PVX_100515	03/12/2012	exon	changed coordinates of exon 2
PVX_100595	22/04/2013	exon	changed coordinates of exon 6*
PVX_100630	03/12/2012	exon	changed coordinates of exon 2
PVX_100670	22/04/2013	exon	changed coordinates of exon 1
PVX_101350	14/12/2012	exon	added exon 2
PVX_101442	22/04/2013	exon	changed coordinates of exon 7
PVX_101505	01/12/2012	exon	added exon 1, extended exon 2
PVX_101510	01/12/2012	exon	added exon 1
PVX_101550	22/04/2013	exon	added exon 1
PVX_101560	22/04/2013	exon	added exon 1
PVX_101565	01/12/2012	exon	changed coordinates of exon 4
PVX_101570	01/12/2012	exon	added exon 4
PVX_101575	01/12/2012	exon	added exon 1
PVX_101575	22/04/2013	exon	added exon 1, extended exon 2
PVX_101585	01/12/2012	exon	added exon 1

PVX_101590	22/04/2013	exon	added exon 1
PVX_101620	01/12/2012	exon	changed coordinates of exon 1
PVX_110830	30/11/2012	exon	added exon 1
PVX_110835	30/11/2012	exon	deleted intron 2
PVX_111150	30/11/2012	exon	changed coordinates of exon 2
PVX_111150	24/12/2012	exon	changed coordinates of exon 5
PVX_111270	30/11/2012	exon	added exon 3
PVX_111292	11/12/2012	exon	changed coordinates of exon 1
PVX_111415	30/11/2012	exon	added exon 7, changed coordinates of exon 8*
PVX_111435	24/12/2012	exon	changed coordinates of exon 7
PVX_111440	30/11/2012	exon	changed coordinates of exon 2*
PVX_111535	11/12/2012	exon	added exon 1, 2, 3*
PVX_113220	16/12/2012	exon	added exon 3
PVX_113230	01/12/2012	exon	deleted exon 4
PVX_113260	01/12/2012	exon	added exon 1, changed coordinates of exon 2
PVX_113500	12/12/2012	exon	added exon 2
PVX_113525	01/12/2012	exon	changed coordinates of exon 1
PVX_113731	01/12/2012	exon	added exon 4*
PVX_113945	05/12/2012	exon	changed coordinates of exon 3
PVX_113980	08/12/2012	exon	deleted intron*
PVX_114070	05/12/2012	exon	changed coordinates of exon 8*
PVX_114250	30/12/2012	exon	changed coordinates of exon 1*
PVX_114270	30/12/2012	exon	merged exon 8*
PVX_114346	01/12/2012	exon	changed coordinates of exon 17, added exon 14
PVX_114350	01/12/2012	exon	changed coordinates of exon 2
PVX_114350	05/12/2012	exon	changed coordinates of exon 5*
PVX_114920	05/12/2012	exon	changed coordinates of exon 3*
PVX_114990	01/12/2012	exon	changed coordinates of exon 7
PVX_115125	12/12/2012	exon	added exon 1
PVX_115425	01/12/2012	exon	changed coordinates of exon 1
PVX_115445	12/12/2012	exon	added exon 5
PVX_115470	01/12/2012	exon	added exon 1, extended exon 2
PVX_116525	01/12/2012	exon	changed coordinates of exon 15, added exon 16
PVX_116582	24/01/2013	exon	added exon 1*
PVX_116585	24/01/2013	exon	added exon 2*
PVX_116635	01/12/2012	exon	added intron 1, changed coordinates of exon 2
PVX_116700	24/01/2013	exon	added exon 1*
PVX_116750	12/12/2012	exon	changed coordinates of exon 1*
PVX_116815	01/12/2012	exon	changed coordinates of exon 3*
PVX_117120	01/12/2012	exon	changed coordinates of exon 2
PVX_117335	22/04/2013	exon	changed coordinates of exon 10, 11, 20, 23, added

			exon 19
PVX_117725	13/12/2012	exon	added exon 1
PVX_117915	22/04/2013	exon	added exon 4
PVX_118445	22/04/2013	exon	changed coordinates of exon 4*
PVX_118560	03/12/2012	exon	changed coordinates of exon 14
PVX_118600	03/12/2012	exon	changed coordinates of exon 11
PVX_118690	13/12/2012	exon	deleted exon 1*
PVX_119265	11/12/2012	exon	added exon 2
PVX_119325	05/12/2012	exon	changed coordinates of exon 4*
PVX_119440	30/11/2012	exon	added exon 4
PVX_119500	30/11/2012	exon	changed coordinates of exon 2
PVX_119550	30/11/2012	exon	added exon 2
PVX_119550	19/02/2013	exon	changed coordinates of exon 1
PVX_119595	30/11/2012	exon	changed coordinates of exon 1
PVX_119660	07/12/2012	exon	deleted intron 4
PVX_119725	30/11/2012	exon	changed coordinates of exon 5
PVX_121870	22/04/2013	exon	added exon 1
PVX_121876	01/12/2012	exon	changed coordinates of exon 2
PVX_121895	02/01/2013	exon	added exon 1
PVX_121965	03/12/2012	exon	changed coordinates of exon 2
PVX_122077	14/12/2012	exon	added exon 9
PVX_122105	03/12/2012	exon	changed coordinates of exon 1
PVX_122130	03/12/2012	exon	changed coordinates of exon 1
PVX_122270	03/12/2012	exon	changed coordinates of exon 4
PVX_122635	09/12/2012	exon	added exon 1
PVX_122655	03/12/2012	exon	changed coordinates of exon 2
PVX_122865	03/12/2012	exon	changed coordinates of exon 1
PVX_123283	03/12/2012	exon	changed coordinates of exon 3
PVX_123290	03/12/2012	exon	changed coordinates of exon 2*
PVX_123415	22/04/2013	exon	changed coordinates of exon 1*
PVX_123530	22/04/2013	exon	added exon 5
PVX_123675	09/12/2012	exon	deleted exon 1*
PVX_123780	03/12/2012	exon	changed coordinates of exon 2
PVX_124020	09/12/2012	exon	deleted exon 2*
PVX_124140	05/12/2012	exon	changed coordinates of exon 1, 2, 5*
PVX_124190	03/12/2012	exon	changed coordinates of exon 7
PVX_124700	01/12/2012	exon	changed coordinates of exon 1*
PVX_124705	01/12/2012	exon	changed coordinates of exon 2
PVX_124708	01/12/2012	exon	added intron 1
PVX_001660	07/12/2012	merge	merged PVX_001660 with PVX_001665
PVX_088790	21/04/2013	merge	merged PVX_088790 with PVX_088785

PVX_095470	30/11/2012	merge	merged PVX_095465 with PVX_095470
PVX_097885	29/12/2012	merge	merged PVX_097880 with PVX_097885
PVX_101385	22/07/2014	merge	merged PVX_101380 with PVX_101385*
PVX_123675	14/12/2013	merge	merged PVX_123675 with PVX_123680*
PVX_124130	14/12/2012	merge	PVX_124125 with PVX_124130
PVX_081294	26/11/2014	split	PVX_081295 has been split into PVX_081294*
PVX_081296	26/11/2014	split	PVX_081295 has been split into PVX_081294*
PVX_098784	28/01/2013	split	split PVX_098785 into PVX_098784*
PVX_098786	28/01/2013	split	split PVX_098785 into PVX_098784*
PVX_122218	09/12/2012	split	split PVX_122220 into PVX_122218*
PVX_122222	09/12/2012	split	split PVX_122220 into PVX_122218*
PVX_002952	20/01/2014	new	gene model added*
PVX_079727	22/11/2014	new	new gene model added
PVX_084277	09/12/2012	new	gene model added*
PVX_088775	03/12/2012	new	gene model added
PVX_088797	03/12/2012	new	gene model added
PVX_089863	24/12/2012	new	new gene model added*
PVX_090830	28/04/2013	new	gene model added
PVX_090835	28/04/2013	new	gene model added
PVX_092897	07/12/2012	new	gene model added
PVX_094270	16/12/2012	new	new gene model added
PVX_094303	07/12/2012	new	gene model added
PVX_095452	07/12/2012	new	gene model added
PVX_095997	06/12/2012	new	gene model added
PVX_096007	04/12/2012	new	gene model added
PVX_097583	08/12/2012	new	gene model added*
PVX_099117	24/12/2012	new	gene model added*
PVX_101503	22/04/2013	new	new gene model added
PVX_101592	01/12/2012	new	gene model added
PVX_110832	30/11/2012	new	new gene model added
PVX_110834	30/11/2012	new	gene model added

*Based on homology and RNA-Seq

[a]All annotation changes made by Ulrike Böhme in the Parasite Genomics group at the WTSI. Gene ids listed may only be present in GeneDB.org which has more up-to-date annotation than Plasmodb.org.

Supplementary Table B: Variably-expressed genes in *P. vivax* clinical isolates

***P. vivax* P01 id**	**Product**	***P. falciparum* 3D7 (1:1 hom)**	**Mean expr.**	**FC**	**CV**	**VMR**
PVP01_0936800	3-oxo-5-alpha-steroid 4-dehydrogenase, putative	PF3D7_1135900	132	1.6	0.41	22.71
PVP01_1271300	40 kDa heat shock protein, putative	NA	30	2.17	0.81	19.94
PVP01_1318400	50S ribosomal protein L17, putative	PF3D7_1431000	90	1.95	0.72	47.1
PVP01_0111000	60S ribosomal protein L34, putative	PF3D7_0710600	283	1.57	0.44	55.57
PVP01_1430300	acyl-CoA binding protein, putative	NA	1050	2.01	0.7	511.13
PVP01_0409900	acyl-CoA synthetase, putative	NA	56	1.71	0.58	19.12
PVP01_0920400	alternative splicing factor ASF-1, putative	PF3D7_1119800	102	1.73	0.49	24.2
PVP01_0934200	apical membrane antigen 1	PF3D7_1133400	84	2.1	0.79	52.84
PVP01_0521400	armadillo-domain containing rhoptry protein,	PF3D7_0414900	120	1.96	0.69	56.65
PVP01_0703100	bacterial histone-like protein, putative	PF3D7_0904700	63	1.79	0.55	18.93
PVP01_0407500	calcium-dependent protein kinase 1, putative	PF3D7_0217500	87	1.63	0.45	17.99
PVP01_1121200	choline/ethanolaminephosphotransferase,	PF3D7_0628300	170	1.61	0.45	33.71
PVP01_0204400	chromatin assembly factor 1 protein WD40 domain,	PF3D7_0110700	98	1.57	0.41	16.19
PVP01_0106500	conserved Plasmodium protein, unknown function	NA	59	1.81	0.57	18.75
PVP01_0110200	conserved Plasmodium protein, unknown function	PF3D7_0709800	200	1.78	0.52	55.04
PVP01_0117300	conserved Plasmodium protein, unknown function	PF3D7_0802900	69	1.66	0.53	19.24
PVP01_0321100	conserved Plasmodium protein, unknown function	PF3D7_0725400	432	1.68	0.45	87.73
PVP01_0414300	conserved Plasmodium protein, unknown function	PF3D7_0210600	139	1.79	0.56	43.16
PVP01_0421700	conserved Plasmodium protein, unknown function	PF3D7_0203400	128	1.69	0.49	30.12
PVP01_0510600	conserved Plasmodium protein, unknown function	PF3D7_0823700	94	1.75	0.51	24.83
PVP01_0511400	conserved Plasmodium protein, unknown function	PF3D7_0822900	122	1.81	0.59	42.51
PVP01_0526400	conserved Plasmodium protein, unknown function	PF3D7_0417000	163	1.59	0.5	41.32
PVP01_0530400	conserved Plasmodium	NA	284	1.57	0.42	50.07

	protein, unknown function					
PVP01_0602700	conserved Plasmodium protein, unknown function	PF3D7_1017500	188	1.53	0.54	54.33
PVP01_0611800	conserved Plasmodium protein, unknown function	NA	38	1.96	0.68	17.36
PVP01_0617300	conserved Plasmodium protein, unknown function	PF3D7_1032200	37	3.26	1.51	84.24
PVP01_0620300	conserved Plasmodium protein, unknown function	NA	347	1.88	0.61	128.85
PVP01_0709600	conserved Plasmodium protein, unknown function	PF3D7_0911100	37	2.2	0.85	27.01
PVP01_0712200	conserved Plasmodium protein, unknown function	NA	61	2.14	0.83	41.75
PVP01_0724700	conserved Plasmodium protein, unknown function	NA	368	1.61	0.44	70.55
PVP01_0730700	conserved Plasmodium protein, unknown function	PF3D7_0932000	321	1.57	0.44	63.43
PVP01_0733300	conserved Plasmodium protein, unknown function	PF3D7_0934600	53	1.81	0.56	16.72
PVP01_0734300	conserved Plasmodium protein, unknown function	NA	36	1.93	0.68	16.66
PVP01_0811300	conserved Plasmodium protein, unknown function	PF3D7_1011200	63	1.7	0.5	15.57
PVP01_0907700	conserved Plasmodium protein, unknown function	PF3D7_1106900	66	1.66	0.52	17.89
PVP01_1207500	conserved Plasmodium protein, unknown function	PF3D7_1347300	64	1.91	0.63	25.19
PVP01_1227100	conserved Plasmodium protein, unknown function	PF3D7_1327300	55	1.77	0.54	16.34
PVP01_1229300	conserved Plasmodium protein, unknown function	PF3D7_1325300	64	1.67	0.49	15.5
PVP01_1247000	conserved Plasmodium protein, unknown function	PF3D7_1459900	139	1.63	0.44	27.37
PVP01_1304000	conserved Plasmodium protein, unknown function	NA	35	2.19	0.85	25.08
PVP01_1335700	conserved Plasmodium protein, unknown function	PF3D7_1413200	40	1.82	0.62	15.08
PVP01_1344100	conserved Plasmodium protein, unknown function	PF3D7_1404700	33	2.35	0.94	29.22
PVP01_1345600	conserved Plasmodium protein, unknown function	PF3D7_1403200	77	1.64	0.54	22.82
PVP01_1402500	conserved Plasmodium protein, unknown function	NA	30	2.91	1.28	49.9
PVP01_1412100	conserved Plasmodium protein, unknown function	PF3D7_1311100	85	1.71	0.51	21.88
PVP01_1419600	conserved Plasmodium protein, unknown function	PF3D7_1318700	109	1.83	0.59	37.52
PVP01_1425800	conserved Plasmodium protein, unknown function	PF3D7_0814500	23	2.14	0.83	15.67
PVP01_1427200	conserved Plasmodium	PF3D7_0813100	66	1.72	0.48	15.36

	protein, unknown function					
PVP01_1433600	conserved Plasmodium protein, unknown function	PF3D7_1214800	277	1.66	0.52	76.36
PVP01_1436200	conserved Plasmodium protein, unknown function	PF3D7_1217400	50	1.9	0.62	19.18
PVP01_1460500	conserved Plasmodium protein, unknown function	NA	25	2.37	0.93	21.51
PVP01_MIT03400	cytochrome b		54	1.71	0.53	14.94
PVP01_0623800	duffy receptor precursor	PF3D7_1301600	77	2.68	1.16	102.89
PVP01_1208800	dynactin subunit 2, putative	PF3D7_1346000	23	2.2	0.8	14.72
PVP01_1258000	gamete egress and sporozoite traversal protein,	PF3D7_1449000	111	1.63	0.54	32.72
PVP01_0115300	gamete release protein, putative	PF3D7_0805200	41	2.44	0.98	38.68
PVP01_1244000	glyceraldehyde-3-phosphate dehydrogenase,	PF3D7_1462800	361	1.73	0.55	109.14
PVP01_0505600	GPI-anchored micronemal antigen, putative	PF3D7_0828800	53	2.17	0.83	36.87
PVP01_1316500	H/ACA ribonucleoprotein complex subunit 3,	PF3D7_1433000	132	1.6	0.41	22.24
PVP01_0917400	heat shock protein 101, putative	PF3D7_1116800	80	1.92	0.63	31.88
PVP01_0423300	hypothetical protein	NA	95	2.49	1.03	99.68
PVP01_0620700	hypothetical protein	NA	93	2.22	0.85	66.72
PVP01_0620900	hypothetical protein	NA	123	1.76	0.63	49.58
PVP01_1031100	hypothetical protein	NA	48	2.22	0.82	32.18
PVP01_0812500	hypoxanthine-guanine phosphoribosyltransferase,	PF3D7_1012400	123	2.08	0.75	69.78
PVP01_0803400	inner membrane complex protein 1c, putative	PF3D7_1003600	383	1.95	0.69	182.15
PVP01_1203100	inner membrane complex protein 1f, putative	PF3D7_1351700	51	1.76	0.56	15.92
PVP01_1008000	inner membrane complex protein 1g, putative	PF3D7_0525800	181	1.93	0.64	74.97
PVP01_1221800	isoleucine--tRNA ligase, putative	PF3D7_1332900	72	1.66	0.45	14.93
PVP01_0926500	kelch protein, putative	PF3D7_1125800	169	1.81	0.55	50.38
PVP01_1031200*	merozoite surface protein 3	NA	60	2.77	1.18	83.57
PVP01_1031400*	merozoite surface protein 3	NA	46	2.29	0.87	34.13
PVP01_1031500*	merozoite surface protein 3	NA	70	3.31	1.54	166.66
PVP01_1031600*	merozoite surface protein 3	NA	155	2.36	0.93	133.65
PVP01_1031700*	merozoite surface protein 3	NA	114	2.82	1.25	176.54
PVP01_0010200*	merozoite surface protein 3, putative	NA	21	1.76	0.84	14.76
PVP01_0010220*	merozoite surface protein 3, putative	NA	149	2.03	0.73	78.39
PVP01_0418400	merozoite surface protein 5	NA	74	1.66	0.54	21.68

PVP01_1219800*	merozoite surface protein 7 (MSP7)	NA	94	2.29	0.9	75.58
PVP01_1220200*	merozoite surface protein 7 (MSP7), putative	NA	287	2.19	0.9	231.74
PVP01_1220300*	merozoite surface protein 7 (MSP7), putative	NA	63	1.76	0.63	24.71
PVP01_0613800	merozoite TRAP-like protein, putative	PF3D7_1028700	39	1.93	0.63	15.5
PVP01_0824100	microneme associated antigen, putative	PF3D7_0316000	45	1.87	0.6	16.37
PVP01_1315900	microsomal signal peptidase 12 kDa subunit,	PF3D7_1433600	98	1.74	0.54	28.44
PVP01_0818500	microtubule and actin binding protein, putative	PF3D7_0321700	88	2.02	0.69	41.97
PVP01_1463500	myosin A tail domain interacting protein,	PF3D7_1246400	154	1.77	0.62	58.63
PVP01_1212200	myosin A, putative	PF3D7_1342600	135	1.89	0.67	60.67
PVP01_1300900	NIMA related kinase 3, putative	PF3D7_1201600	68	1.67	0.48	15.8
PVP01_0925400	nuclear preribosomal assembly protein, putative	PF3D7_1124800	51	1.79	0.56	15.96
PVP01_1105500	nucleoside diphosphate kinase, putative	PF3D7_1366500	42	2	0.7	20.79
PVP01_1229400	oxidoreductase, putative	PF3D7_1325200	197	2.07	0.74	107.47
PVP01_0206100	photosensitized INA-labeled protein 1, PhIL1,	PF3D7_0109000	136	1.77	0.52	36.76
PVP01_0011000	PIR protein	NA	52	3.11	1.41	101.98
PVP01_0102200	PIR protein, pseudogene	NA	305	1.71	0.48	71.45
PVP01_0001440	Plasmodium exported protein (PHIST), unknown	NA	64	1.75	0.57	20.52
PVP01_0119200	Plasmodium exported protein (PHIST), unknown	PF3D7_0801000	189	1.66	0.45	38.01
PVP01_0504000	Plasmodium exported protein (PHIST), unknown	PF3D7_0830600	50	1.81	0.6	17.86
PVP01_0601700	Plasmodium exported protein (PHIST), unknown	PF3D7_1016600	38	2.5	1.03	40.2
PVP01_0623700	Plasmodium exported protein (PHIST), unknown	NA	302	1.6	0.4	48.71
PVP01_0623100	Plasmodium exported protein, unknown function	NA	412	1.94	0.65	172.34
PVP01_0948800	Plasmodium exported protein, unknown function	NA	53	1.57	0.56	16.57
PVP01_0949000	Plasmodium exported protein, unknown function	NA	27	2.22	0.83	19.02
PVP01_1033800	Plasmodium exported protein, unknown function	NA	270	2.13	0.8	170.97
PVP01_1147000	Plasmodium exported protein, unknown function	NA	35	2.24	0.88	27.37
PVP01_1147500	Plasmodium exported protein, unknown function	NA	40	1.93	0.63	15.79

PVP01_1201400	Plasmodium exported protein, unknown function	NA	49	2.77	1.2	70.01
PVP01_1271400	Plasmodium exported protein, unknown function	NA	74	1.73	0.5	18.19
PVP01_1402200	Plasmodium exported protein, unknown function	NA	241	2.8	1.22	360.43
PVP01_1234800	pre-mRNA-splicing factor ISY1, putative	PF3D7_1472000	83	2.05	0.73	43.84
PVP01_1457000	protein kinase 2, putative	PF3D7_1238900	46	2.05	0.75	26.16
PVP01_1421400	ras-related protein Rab-11A, putative	PF3D7_1320600	245	1.62	0.41	41.82
PVP01_0701200	reticulocyte binding protein 1a	NA	48	2.27	0.89	37.81
PVP01_1471400	reticulocyte binding protein 2, pseudogene	NA	36	2.17	0.86	27
PVP01_1402400	reticulocyte binding protein 2a	NA	27	2.33	0.94	24.39
PVP01_0800700	reticulocyte binding protein 2b	NA	29	2.29	0.91	24.08
PVP01_0534300*	reticulocyte binding protein 2c	NA	22	2.26	0.89	17.81
PVP01_1469400	reticulocyte binding protein 3, pseudogene	NA	32	2.16	0.81	20.94
PVP01_0700500	reticulocyte binding protein, pseudogene	NA	54	2.38	0.96	50.18
PVP01_0802200	RNA-binding protein, putative	PF3D7_1002400	98	1.61	0.43	17.85
PVP01_1411700	RNA-binding protein, putative	PF3D7_1310700	474	2.01	0.7	234.05
PVP01_1322100	selenoprotein, putative	PF3D7_1427200	102	1.6	0.42	18.01
PVP01_0417400*	serine-repeat antigen 4 (SERA)	NA	52	1.94	0.66	22.65
PVP01_0504400	sporozoite invasion-associated protein 2,	PF3D7_0830300	32	2.42	1.03	33.53
PVP01_1026500	subtilisin-like protease 1	PF3D7_0507500	168	1.69	0.47	36.92
PVP01_1313200	translocon component PTEX150, putative	PF3D7_1436300	47	1.77	0.57	15.13
PVP01_1267100	triosephosphate isomerase, putative	PF3D7_1439900	69	1.65	0.54	19.87
PVP01_0000170	tryptophan-rich antigen	NA	74	2.17	0.87	56.53
PVP01_1401800	tryptophan-rich antigen (Pv-fam-a)	PF3D7_0102700	40	2.61	1.1	47.66
PVP01_0834500	ubiquitin-conjugating enzyme E2, putative	PF3D7_0305700	210	1.58	0.44	40.57

*Potential artefact due to at least 1 isolate contained large gaps in mapping alignment indicating divergence from the reference.

Top 130 genes variably expressed between clinical isolates (PV0563, PV0565, PV0568, PV0417-3) as ranked by three methods for detecting spread in data. FC is the 'maximum fold-change' from the mean FPKM of at least one of the isolates. CV is the coeffienct of variation and refeclts the ratio of the standard deviation to the mean. VMR is the variance-to-mean ratio and provides a normalized view of the dispersion of the expression of the isolates. Mean expr. = Mean FPKMs of the 4 isolates. FPKMs computed by Cufflinks from assemblies mapped with TopHat to *P. vivax*.

Supplementary Table C: Top-expressed genes unique to RNA-Seq data

***P. vivax* P01 id**	**FPKM, *P. vivax* isolate**					**Product**
	563	565	068	417-3	Mean	
PVP01_1311000	660	900	1277	981	954	polyubiquitin 5, putative
PVP01_0703800	673	1010	1188	833	926	high molecular weight rhoptry protein 3,
PVP01_1265900	909	778	961	760	852	KS1 protein precursor, putative
PVP01_0830600	565	627	338	497	507	60S acidic ribosomal protein P2, putative
PVP01_1260400	450	538	474	489	487	centrin-2, putative
PVP01_0321100	340	325	724	340	432	conserved Plasmodium protein, unknown function
PVP01_0903800	454	330	363	380	382	hypothetical protein
PVP01_1303100	369	339	406	361	369	ubiquitin-conjugating enzyme E2, putative
PVP01_1244000	271	623	160	389	361	glyceraldehyde-3-phosphate dehydrogenase,
PVP01_1034400	313	313	420	308	339	Plasmodium exported protein, unknown function
PVP01_0504300	391	350	285	290	329	conserved Plasmodium protein, unknown function
PVP01_0730700	341	280	503	160	321	conserved Plasmodium protein, unknown function
PVP01_0102200	276	206	522	218	305	PIR protein, pseudogene
PVP01_0607600	292	269	311	340	303	serine/arginine-rich splicing factor 4,
PVP01_1131900	314	296	274	319	301	conserved Plasmodium protein, unknown function
PVP01_1020200	205	275	374	341	299	secreted ookinete protein, putative
PVP01_1312300	254	325	264	330	293	ribonucleoside-diphosphate reductase, large
PVP01_0530400	197	193	447	299	284	conserved Plasmodium protein, unknown function
PVP01_0512900	259	281	290	272	276	conserved Plasmodium protein, unknown function
PVP01_1133400	278	350	225	249	275	RNA and export factor binding protein, putative
PVP01_1033800	262	107	576	135	270	Plasmodium exported protein, unknown function
PVP01_0710400	267	269	227	259	255	inhibitor of cysteine proteases, putative
PVP01_1136000	283	295	178	238	248	conserved Plasmodium protein, unknown function
PVP01_1004500	204	248	257	263	243	conserved Plasmodium protein, unknown function
PVP01_1402200	167	96	674	26	241	Plasmodium exported protein, unknown function

PVP01_0010990	233	207	313	210	241	Plasmodium exported protein, unknown function
PVP01_1336900	175	264	273	214	231	p1/s1 nuclease, putative
PVP01_0816700	209	227	299	188	231	survival motor neuron-like protein, putative
PVP01_1143000	281	237	246	155	230	long chain polyunsaturated fatty acid elongation
PVP01_0530800	202	172	219	320	228	alpha tubulin 2, putative
PVP01_1135900	236	141	229	290	224	conserved Plasmodium protein, unknown function
PVP01_0528600	184	298	156	242	220	CGI-141 protein homolog, putative
PVP01_1247100	245	260	184	184	218	bax inhibitor 1, putative
PVP01_1147200	200	169	289	158	204	Plasmodium exported protein, unknown function
PVP01_1471900	310	183	115	209	204	RAD protein (Pv-fam-e)
PVP01_1439200	209	195	215	194	203	heterochromatin protein 1, putative
PVP01_0110200	356	137	140	168	200	conserved Plasmodium protein, unknown function
PVP01_0730200	201	195	220	150	192	conserved Plasmodium protein, unknown function
PVP01_0916600	156	211	209	174	188	rhoptry neck protein 4
PVP01_1113500	183	254	151	158	186	conserved Plasmodium protein, unknown function
PVP01_1412600	166	175	218	147	176	conserved Plasmodium protein, unknown function
PVP01_0928300	161	156	187	152	164	CRAL/TRIO domain-containing protein, putative
PVP01_0915400	156	157	151	190	163	serine/threonine-protein kinase PRP4K, putative
PVP01_1134500	124	219	144	160	162	conserved Plasmodium protein, unknown function
PVP01_1229000	187	161	78	196	155	mitochondrial fission 1 protein, putative
PVP01_1116400	170	123	161	164	155	serine/threonine protein phosphatase 5,
PVP01_1463500	188	90	271	65	154	myosin A tail domain interacting protein,
PVP01_1125900	131	169	124	183	152	conserved Plasmodium protein, unknown function
PVP01_0825600	143	158	139	165	151	conserved Plasmodium protein, unknown function
PVP01_1216900	132	187	141	142	151	calcium-dependent protein kinase 5, putative
PVP01_0010220	127	48	119	302	149	merozoite surface protein 3, putative
PVP01_1241400	143	113	161	173	148	conserved Plasmodium protein, unknown function
PVP01_0920600	132	144	138	161	144	conserved Plasmodium protein,

						unknown function
PVP01_1206600	136	141	145	153	144	step II splicing factor, putative
PVP01_0618200	153	155	124	129	140	S-adenosylmethionine decarboxylase/ornithine
PVP01_1441600	125	153	110	169	139	phospholipid-transporting ATPase, putative
PVP01_1006200	90	205	133	107	134	conserved Plasmodium protein, unknown function
PVP01_0316300	146	117	143	121	132	conserved Plasmodium protein, unknown function
PVP01_0729900	126	154	100	137	129	selenoprotein, putative
PVP01_0733800	176	117	130	89	128	conserved Plasmodium protein, unknown function
PVP01_0945800	117	168	92	134	128	coatomer subunit gamma, putative
PVP01_1232800	141	156	97	114	127	protein transport protein SFT2, putative
PVP01_1218400	142	128	104	132	126	conserved Plasmodium protein, unknown function
PVP01_0733200	112	126	112	151	125	vacuolar ATP synthase subunit e, putative
PVP01_1022400	98	168	116	117	125	apical rhoptry neck protein, putative
PVP01_1449300	122	114	118	134	122	ras-related protein Rab-2, putative
PVP01_0712800	103	116	147	117	121	conserved Plasmodium protein, unknown function
PVP01_0517800	179	94	87	117	119	protein kinase c inhibitor-like protein,
PVP01_0109000	105	125	118	126	118	cloroquine resistance associated protein Cg8,
PVP01_0923900	105	133	110	120	117	RING zinc finger protein, putative
PVP01_1125000	173	109	87	93	116	anaphase promoting complex subunit, putative
PVP01_0726900	109	128	96	125	115	conserved Plasmodium protein, unknown function
PVP01_1442400	110	105	112	126	113	conserved Plasmodium protein, unknown function
PVP01_0111900	83	137	94	139	113	regulator of chromosome condensation, putative
PVP01_1241800	120	92	117	124	113	conserved Plasmodium protein, unknown function
PVP01_1033600	96	167	100	87	112	skeleton-binding protein 1, putative
PVP01_0823400	114	143	57	133	112	HVA22/TB2/DP1 family protein, putative
PVP01_1230400	92	96	146	111	111	micro-fibrillar-associated protein, putative
PVP01_1111800	87	101	146	110	111	RNA-binding protein, putative
PVP01_1316000	102	86	145	108	110	DNA topoisomerase II, putative
PVP01_0921000	137	78	130	96	110	alpha/beta hydrolase fold domain

						containing
PVP01_1138300	108	114	94	123	110	transcription elongation factor SPT5, putative
PVP01_0317600	102	125	70	131	107	conserved Plasmodium protein, unknown function
PVP01_0920800	80	157	81	109	107	conserved Plasmodium protein, unknown function
PVP01_0201900	115	90	109	112	106	PIR protein
PVP01_1437400	95	118	91	122	106	arginyl-tRNA synthetase, putative
PVP01_1329200	129	91	93	108	105	conserved Plasmodium protein, unknown function
PVP01_1430000	151	83	90	96	105	protein phosphatase PPM5, putative
PVP01_0603500	107	122	86	102	105	conserved Plasmodium protein, unknown function
PVP01_0505500	85	97	117	113	103	conserved Plasmodium protein, unknown function
PVP01_1212900	103	104	88	115	102	vacuolar ATP synthase subunit d, putative
PVP01_1263900	91	99	105	113	102	conserved Plasmodium protein, unknown function
PVP01_0934600	102	104	81	119	102	RNA (uracil-5-)methyltransferase, putative
PVP01_1212100	137	79	115	73	101	transcription activator, putative
PVP01_0409400	91	105	86	119	100	conserved Plasmodium protein, unknown function
PVP01_1261400	88	105	128	80	100	RNA-binding protein, putative
PVP01_1301500	103	74	121	103	100	mitochondrial phosphate carrier protein,

Genes with mean FPKMs over 100 from the P. vivax RNA-Seq data not in the *P. vivax* microarray dataset. It is possible that some microarray probes overlap this data, but naming and annotation inconsistencies between the *P. vivax* microarray dataset and the *P. vivax* P01 reference genome made them difficult to detect. FPKMs of the 4 isolates computed by Cufflinks from assemblies mapped with TopHat to *P. vivax* P01.

Supplementary Table D: *P. vivax* recombinant protein ectodomains

Accession number	Common name	Length (aa)	Expected size (kDa)	Region expressed
PVX_099980	MSP1	1702	215	E20-P1721
PVX_097670	MSP3.1, MSP3A[2], MSP3γ	825	114	N21-K845
PVX_097680	MSP3.3, MSP3C[2], MSP3β	997	133	D20-K1016
PVX_097685	MSP3.4, MSP3D1	1091	140	N21-M1111
PVX_097720	MSP3.10, MSP3H[2], MSP3α	829	113	E24-W852
PVX_003775	MSP4[2]	202	45	A26-S227
PVX_003770	MSP5[2]	346	62	R22-S367
PVX_082700	MSP7.1[3]	399	70	E22-Y420
PVX_082675	MSP7.6[3]	428	72	A26-N453
PVX_082655	MSP7.9[3]	364	65	E24-V387
PVX_114145	MSP10[2]	435	72	A23-S457
PVX_113775	P12	316	61	F24-A339
PVX_113780	P12p[2]	395	68	V24-P418
PVX_097960	P38[2]	306	60	K29-G334
PVX_000995	P41	363	67	E22-E384
PVX_115165	P92	833	118	D23-H855
PVX_001725	RON12	274	54	L25-S298
PVX_088910	GAMA	729	103	L21-S749
PVX_090075	Pv34[2]	323	61	N25-S347
PVX_090210	ARP	265	54	K21-P285
PVX_090240	CyRPA	344	65	T23-D366
PVX_095055	RIPR	1054	144	N22-A1075
PVX_098712	RhopH3	866	125	R25-T890
PVX_110810	DBP	986	135	V23-T1008
	DBP-RII	328	64	D194-T521
PVX_111290	MTRAP	292	58	K24-G315
PVX_121885	CLAG[4]	1138	159	Y25-L1162
PVX_081550		473	80	R23-F495

PVX_084815		249	53	R22-A270[5]
PVX_084970		892	121	D24-S915
PVX_116775		314	60	E21-S334
PVX_101590	RBP2-like[4]	619	97	K22-K640
PVX_001015		330	62	Q28-T357
PVX_110945		316	61	D28-K343
PVX_110950		379	66	K24-L402
PVX_110960		648	92	A23-K670
PVX_110965		421	69	D21-A441

Boundaries of expressed regions are delimited by the N- and C-terminal amino acid residues according to their codon positions along the *P. vivax* Sal 1 reference protein sequence.

[1]MSP9 and MSP1P failed to be sub-cloned or expressed, respectively

[2]Based on genedb.org annotation

[3]Based on MSP7 family naming in (Kadekoppala and Holder, 2010)

[4]Based on *P. vivax* product description

[5]S270 in unmodified sequence