

Table S1. Microarrays Results

GENES UP-REGULATED IN SPOROZOITES INCUBATED AT 37°C WITH HEPATOCYTES

| gene.ID                          | salivary Gland sporozoite mean intensity | sporozoite incubated 1 hr at 37C° with hepatocytes mean intensity | expression ratio (sporozoite incubated 1 hr at 37C° with hepatocytes / salivary gland sporozoite) | Found in Axenic liver stage (Wang et al 2004) | contains a predicted signal peptide/anchor (SignalP) | Contains at least 1 predicted transmembrane domains (TMAP, TMPRED, TOPPRE2 and TMHMM2) | detected in sporozoite using mass spectrometry (Florens et al 2002) | Presence of orthologue in <i>P. berghei</i> (tarun et al 2008) | Presence of orthologue in <i>P. chabaudi</i> (tarun et al 2008) | Presence of orthologue in <i>P. yoelii</i> (tarun et al 2008) | description                                                                                                                                  |
|----------------------------------|------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| host cell invasion /cell passage |                                          |                                                                   |                                                                                                   |                                               |                                                      |                                                                                        |                                                                     |                                                                |                                                                 |                                                               |                                                                                                                                              |
| PF08_0005                        | 250                                      | 2544                                                              | 10,2                                                                                              | yes                                           | yes                                                  |                                                                                        | yes                                                                 | NA                                                             | NA                                                              | NA                                                            | SIAP-2                                                                                                                                       |
| PF13_0201                        | 1355                                     | 9509                                                              | 7,0                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000374.03.0                                                  | PC103922.00.0                                                   | PY03052                                                       | TRAP/ sporozoite surface protein 2                                                                                                           |
| PFD0425w                         | 481                                      | 2111                                                              | 4,4                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000251.01.0                                                  | PC000627.01.0                                                   | PY00455                                                       | SIAP-1 /S5 (Kaiser et al 2004)/ protein recongnized by volunteers immunized by irradiated <i>P.falciparum</i> sporozoite (Doolan et al 2003) |
| PF14_0425                        | 241                                      | 978                                                               | 4,1                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000757.02.0                                                  | PC001392.02.0                                                   | PY03709                                                       | fructose-bisphosphate aldolase (Buscaglia et al 2003)                                                                                        |
| PFF1420w                         | 387                                      | 1379                                                              | 3,6                                                                                               |                                               | yes                                                  | yes                                                                                    |                                                                     | PB000484.00.0                                                  | PC000649.03.0                                                   | PY04170                                                       | phosphatidylcholine-sterol acyltransferase precursor putative (Bhanot et al 2005) / UIS10 (Matuschewski et al 2002)                          |
| PF11_0344                        | 406                                      | 1354                                                              | 3,3                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000821.01.0                                                  | PC301665.00.0                                                   | PY01581                                                       | apical membrane antigen 1 precursor (Silvie et al 2004)                                                                                      |
| PFB0570w                         | 286                                      | 916                                                               | 3,2                                                                                               |                                               | yes                                                  |                                                                                        |                                                                     | PB001140.00.0                                                  | PC000225.03.0                                                   | PY02991                                                       | pISPATR (Chattopadhyay et al 2003)                                                                                                           |
| PF10_0281                        | 225                                      | 727                                                               | 3,2                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000355.03.0                                                  | PC000113.04.0                                                   | NA                                                            | merozoite TRAP-like protein, MTRAP (Baum J et al 2005)                                                                                       |
| PFF0800w                         | 341                                      | 1053                                                              | 3,1                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB001517.02.0                                                  | PC000366.04.0                                                   | PY01499                                                       | TRAP-like protein, TRAP2 (Baum J et al 2005)                                                                                                 |
| PFD0430c                         | 728                                      | 2138                                                              | 2,9                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000252.01.0                                                  | PC000807.02.0                                                   | PY00454                                                       | SPECT-2 (Ishino et al 2005)                                                                                                                  |
| MAL13P1.212                      | 1027                                     | 2960                                                              | 2,9                                                                                               | yes                                           | yes                                                  |                                                                                        |                                                                     | NA                                                             | NA                                                              | NA                                                            | SPECT-1 (Ishino et al 2004)                                                                                                                  |
| PF14_0102                        | 421                                      | 958                                                               | 2,3                                                                                               |                                               | yes                                                  |                                                                                        | yes                                                                 | PB000779.00.0                                                  | PC000272.01.0                                                   | PY00622                                                       | rhoptry-associated protein 1, RAP1 (Harnyuttanakorn et al 1992)                                                                              |
| PF14_0495                        | 424                                      | 862                                                               | 2,0                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000379.02.0                                                  | PC000433.04.0                                                   | PY06813                                                       | rhoptry neck protein 2, putative                                                                                                             |
| metal-ion homeostasis            |                                          |                                                                   |                                                                                                   |                                               |                                                      |                                                                                        |                                                                     |                                                                |                                                                 |                                                               |                                                                                                                                              |
| PFF1325c                         | 350                                      | 1594                                                              | 4,6                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000069.01.0                                                  | PC000488.03.0                                                   | PY04641                                                       | c3h4-type ring finger protein putative                                                                                                       |
| PF13_0019                        | 214                                      | 806                                                               | 3,8                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000105.00.0                                                  | PC000865.01.0                                                   | PY02931                                                       | sodiumhydrogen exchanger, Na+, H+ antiporter                                                                                                 |
| PF14_0518                        | 431                                      | 1414                                                              | 3,3                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000632.00.0                                                  | PC000972.01.0                                                   | PY00856                                                       | nifU protein putative                                                                                                                        |
| metabolic processes              |                                          |                                                                   |                                                                                                   |                                               |                                                      |                                                                                        |                                                                     |                                                                |                                                                 |                                                               |                                                                                                                                              |
| PFL1260w                         | 261                                      | 2214                                                              | 8,5                                                                                               | yes                                           |                                                      | yes                                                                                    |                                                                     | PB001058.01.0                                                  | PC000009.01.0                                                   | PY03530                                                       | hydrolase phosphatase, putative                                                                                                              |
| PFI1090w                         | 379                                      | 2690                                                              | 7,1                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000151.03.0                                                  | PC000567.01.0                                                   | PY06246                                                       | s-adenosylmethionine synthetase, putative                                                                                                    |
| PF10_0322                        | 485                                      | 3139                                                              | 6,5                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000516.03.0                                                  | PC000866.02.0                                                   | PY04754                                                       | S-adenosylmethionine decarboxylase-ornithine decarboxylase                                                                                   |
| PF13_0286                        | 436                                      | 2821                                                              | 6,5                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000001.01.0                                                  | PC000023.01.0                                                   | PY02347                                                       | methyltransferase, putative                                                                                                                  |
| PF14_0447                        | 1936                                     | 11823                                                             | 6,1                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000083.02.0                                                  | PC000109.02.0                                                   | PY06896                                                       | glutaminyl-peptide cyclotransferase                                                                                                          |
| PFC0050c                         | 1162                                     | 4825                                                              | 4,2                                                                                               |                                               | yes                                                  | yes                                                                                    |                                                                     | NA                                                             | NA                                                              | NA                                                            | long chain acyl-CoA synthase, ATP dependent, family 1, isoform 6                                                                             |
| MAL7P1.150                       | 296                                      | 1223                                                              | 4,1                                                                                               |                                               |                                                      |                                                                                        |                                                                     | PB000702.00.0                                                  | PC000890.01.0                                                   | PY02096                                                       | cysteine desulfurase, putative                                                                                                               |
| PF10_0218                        | 317                                      | 1216                                                              | 3,8                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB001560.02.0                                                  | PC302082.00.0                                                   | PY01660                                                       | citrate synthase, mitochondrial precursor, putative                                                                                          |
| MAL8P1.156                       | 1166                                     | 3998                                                              | 3,4                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000906.01.0                                                  | PC000941.01.0                                                   | PY03463                                                       | mannose-6-phosphate isomerase, putative                                                                                                      |
| PFD0285c                         | 271                                      | 921                                                               | 3,4                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB300815.00.0                                                  | PC000176.03.0                                                   | PY00349                                                       | lysine decarboxylase, putative                                                                                                               |
| MAL8P1.17                        | 237                                      | 797                                                               | 3,4                                                                                               | yes                                           | yes                                                  | yes                                                                                    | yes                                                                 | PB001298.00.0                                                  | PC000663.04.0                                                   | PY00638                                                       | disulfide isomerase precursor, putative                                                                                                      |
| MAL13P1.121                      | 1108                                     | 3738                                                              | 3,4                                                                                               |                                               | yes                                                  | yes                                                                                    |                                                                     | PB000368.00.0                                                  | PC000035.00.0                                                   | PY06466                                                       | adenosine-diphosphatase                                                                                                                      |
| PF14_0615                        | 289                                      | 924                                                               | 3,2                                                                                               |                                               |                                                      |                                                                                        | yes                                                                 | PB300802.00.0                                                  | PC000362.04.0                                                   | PY04403                                                       | ATP synthase (CAC39) subunit, putative                                                                                                       |
| PFI1370c                         | 356                                      | 1079                                                              | 3,0                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB001578.02.0                                                  | PC000153.02.0                                                   | PY05588                                                       | phosphatidylserine decarboxylase, PfPSD                                                                                                      |
| PFI0945w                         | 166                                      | 489                                                               | 2,9                                                                                               |                                               |                                                      |                                                                                        | yes                                                                 | PB000418.03.0                                                  | PC000932.01.0                                                   | PY05336                                                       | Thioredoxin, putative                                                                                                                        |
| PFL1270w                         | 175                                      | 510                                                               | 2,9                                                                                               |                                               |                                                      |                                                                                        | yes                                                                 | PB001056.01.0                                                  | PC000833.02.0                                                   | PY03531                                                       | cof-like hydrolase, had-superfamily, subfamily iib                                                                                           |
| PF14_0164                        | 241                                      | 663                                                               | 2,8                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB300230.00.0                                                  | PC000975.01.0                                                   | PY04261                                                       | NADP-specific glutamate dehydrogenase                                                                                                        |
| PFF0625w                         | 244                                      | 647                                                               | 2,7                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000526.00.0                                                  | PC000909.01.0                                                   | PY03098                                                       | nucleolar GTP-binding protein 1, putative                                                                                                    |
| PFE0700c                         | 904                                      | 2376                                                              | 2,6                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000310.03.0                                                  | PC000726.01.0                                                   | PY02818                                                       | tubulin-tyrosine ligase, putative                                                                                                            |
| PFF0530w                         | 365                                      | 962                                                               | 2,6                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB001252.02.0                                                  | PC000215.04.0                                                   | PY03111                                                       | transketolase putative                                                                                                                       |
| PFI1670c                         | 171                                      | 440                                                               | 2,6                                                                                               | yes                                           |                                                      |                                                                                        |                                                                     | PB001133.02.0                                                  | PC000234.01.0                                                   | PY06101                                                       | vacuolar ATP synthase subunit E, putative                                                                                                    |
| MAL13P1.319                      | 235                                      | 609                                                               | 2,6                                                                                               |                                               | yes                                                  | yes                                                                                    | yes                                                                 | PB000510.01.0                                                  | PC000325.03.0                                                   | PY00839                                                       | indole-3-glycerol-phosphate synthase, putative                                                                                               |
| PF14_0598                        | 179                                      | 443                                                               | 2,5                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000084.03.0                                                  | PC000143.05.0                                                   | PY03280                                                       | glyceraldehyde-3-phosphate dehydrogenase                                                                                                     |
| PFE0555w                         | 505                                      | 1245                                                              | 2,5                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000912.01.0                                                  | PC000036.02.0                                                   | PY04895                                                       | stearyl-CoA Delta 9 desaturase, putative                                                                                                     |
| PF11_0405                        | 298                                      | 705                                                               | 2,4                                                                                               |                                               |                                                      |                                                                                        | yes                                                                 | PB000439.01.0                                                  | PC000026.04.0                                                   | PY02067                                                       | AAA family ATPase, putative                                                                                                                  |
| PFI110w                          | 178                                      | 430                                                               | 2,4                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000319.00.0                                                  | PC000947.01.0                                                   | PY04688                                                       | glutamate--ammonia ligase (glutamine synthetase), putative                                                                                   |
| PF14_0038                        | 275                                      | 657                                                               | 2,4                                                                                               |                                               |                                                      |                                                                                        |                                                                     | PB001331.02.0                                                  | PC000171.05.0                                                   | PY05430                                                       | cytochrome c, putative                                                                                                                       |
| PFL0630w                         | 235                                      | 558                                                               | 2,4                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000191.02.0                                                  | PC000220.05.0                                                   | PY04921                                                       | iron-sulfur subunit of succinate dehydrogenase                                                                                               |
| MAL13P1.225                      | 304                                      | 699                                                               | 2,3                                                                                               |                                               | yes                                                  | yes                                                                                    |                                                                     | PB105583.00.0                                                  | PC103721.00.0                                                   | PY00586                                                       | thioredoxin, putative                                                                                                                        |
| PF08_0113                        | 460                                      | 1054                                                              | 2,3                                                                                               |                                               |                                                      | yes                                                                                    | yes                                                                 | PB000782.00.0                                                  | PC300005.00.0                                                   | PY05420                                                       | vacuolar proton-translocating ATPase subunit A, putative                                                                                     |
| PF11_0412                        | 202                                      | 456                                                               | 2,3                                                                                               | yes                                           |                                                      | yes                                                                                    |                                                                     | PB000656.03.0                                                  | PC301156.00.0                                                   | PY00743                                                       | Vacuolar ATP synthase subunit F, putative                                                                                                    |
| PF14_0660                        | 188                                      | 406                                                               | 2,2                                                                                               |                                               | yes                                                  | yes                                                                                    |                                                                     | PB000392.02.0                                                  | PC302368.00.0                                                   | PY03645                                                       | phosphoesterase, putative                                                                                                                    |
| PF14_0314                        | 181                                      | 396                                                               | 2,2                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000212.01.0                                                  | PC000775.03.0                                                   | PY05679                                                       | chromatin assembly factor 1 p55 subunit, putative                                                                                            |
| PF10_0274                        | 252                                      | 555                                                               | 2,2                                                                                               |                                               |                                                      |                                                                                        |                                                                     | PB000224.01.0                                                  | PC000396.02.0                                                   | PY02953                                                       | methyltransferase, putative                                                                                                                  |
| PF14_0350                        | 245                                      | 536                                                               | 2,2                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB000637.00.0                                                  | PC000449.04.0                                                   | NA                                                            | Acyl-CoA N-acyltransferase protein, putative                                                                                                 |
| PF10_0120                        | 464                                      | 971                                                               | 2,1                                                                                               |                                               |                                                      |                                                                                        |                                                                     | PB000269.03.0                                                  | PC301404.00.0                                                   | PY03477                                                       | ubiquinol-cytochrome c reductase complex subunit, putative                                                                                   |
| PFC0995c                         | 397                                      | 844                                                               | 2,1                                                                                               |                                               |                                                      | yes                                                                                    |                                                                     | PB001152.01.0                                                  | PC301445.00.0                                                   | PY01256                                                       | acyl CoA:diacylglycerol acyltransferase, putative                                                                                            |

|                    |       |       |      |     |     |     |     |               |               |         |                                                                                                                                               |
|--------------------|-------|-------|------|-----|-----|-----|-----|---------------|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| PF11_0174          | 549   | 1154  | 2.1  |     | yes |     |     | PB000856.03.0 | PC000818.02.0 | PY05365 | cathepsin C, homolog                                                                                                                          |
| nucleic metabolism |       |       |      |     |     |     |     |               |               |         |                                                                                                                                               |
| PFL1005c           | 161   | 1731  | 10.8 |     |     |     |     | PB000771.00.0 | PC302534.00.0 | PY04907 | chromodomain protein                                                                                                                          |
| PFC0920w           | 308   | 3107  | 10.1 |     |     | yes | yes | PB001096.02.0 | PC000384.04.0 | PY00436 | histone H2A variant, putative                                                                                                                 |
| PFF0860c           | 439   | 4099  | 9.3  | yes |     | yes |     | PB300144.00.0 | PC000638.00.0 | PY05076 | histone h2a                                                                                                                                   |
| PF14_0695          | 148   | 1101  | 7.4  |     |     | yes |     | PB000837.02.0 | PC300200.00.0 | PY04295 | DNA-directed RNA polymerase alpha subunit truncated putative                                                                                  |
| PFL0635c           | 195   | 1379  | 7.1  |     |     | yes |     | PB000190.02.0 | PC000050.03.0 | PY04922 | bromodomain protein putative                                                                                                                  |
| PF11_0091          | 707   | 4187  | 5.9  |     |     | yes |     | PB001077.01.0 | PC301184.00.0 | PY07039 | transcription factor with AP2 domain(s), putative                                                                                             |
| PF14_0633          | 471   | 2647  | 5.6  |     |     |     |     | PB000752.01.0 | PC000659.02.0 | PY00247 | transcription factor with AP2 domain(s), putative                                                                                             |
| PFC0465c           | 797   | 4444  | 5.6  |     |     |     |     | PB001198.00.0 | PC000763.01.0 | PY05315 | Pre-mRNA splicing factor, putative                                                                                                            |
| PF10_0063          | 164   | 903   | 5.5  |     |     |     | yes | PB000878.02.0 | PC000206.00.0 | NA      | DNA/ RNA-binding protein, putative                                                                                                            |
| PFD0825c           | 321   | 1705  | 5.3  |     | yes |     |     | PB000416.02.0 | PC001161.02.0 | PY04369 | RNA-binding protein of pumilio mpt5 family putative                                                                                           |
| PFF0865w           | 702   | 3368  | 4.8  |     |     |     | yes | NA            | NA            | PY05073 | histone h3                                                                                                                                    |
| PF11_0061          | 442   | 2009  | 4.5  |     |     |     | yes | NA            | NA            | NA      | histone H4, putative                                                                                                                          |
| PF07_0054          | 239   | 1000  | 4.2  | yes |     |     | yes | PB001306.02.0 | PC000354.03.0 | PY02616 | histone h2b putative                                                                                                                          |
| PFI0820c           | 277   | 1130  | 4.1  |     |     |     |     | PB000805.02.0 | PC000519.00.0 | PY06963 | RNA-binding protein putative                                                                                                                  |
| PFL2140c           | 650   | 2555  | 3.9  | yes |     | yes | yes | PB000586.02.0 | PC001140.02.0 | PY03828 | ADP-ribosylation factor GTPase-activating protein                                                                                             |
| PF10_0214          | 264   | 995   | 3.8  |     |     | yes |     | PB000204.01.0 | PC000285.00.0 | PY04813 | RNA binding protein, putative                                                                                                                 |
| PF11_0319          | 667   | 2513  | 3.8  |     |     | yes |     | PB300007.00.0 | PC000548.01.0 | PY01166 | mitochondrial rpoD precursor, putative                                                                                                        |
| PFD0985w           | 349   | 1297  | 3.7  |     |     | yes |     | PB000863.01.0 | PC000577.00.0 | PY06328 | transcription factor with AP2 domain(s), putative                                                                                             |
| PFF0510w           | 834   | 3001  | 3.6  |     |     |     |     | NA            | NA            | PY00496 | histone H3 putative                                                                                                                           |
| PFF1100c           | 765   | 2689  | 3.5  |     | yes |     |     | PB000790.01.0 | PC000091.02.0 | PY02180 | transcription factor with AP2 domain(s), putative                                                                                             |
| PF13_0142          | 340   | 1184  | 3.5  |     |     |     |     | PB000186.00.0 | PC000526.03.0 | PY00919 | Lsm6 homologue, putative                                                                                                                      |
| PF08_0096          | 320   | 1105  | 3.5  |     |     |     |     | PB000057.03.0 | PC000292.01.0 | PY02224 | RNA helicase putative                                                                                                                         |
| PF14_0413          | 864   | 2767  | 3.2  |     | yes |     |     | PB000880.03.0 | PC000337.02.0 | PY01911 | CAF1 family ribonuclease, putative                                                                                                            |
| PF08_0074          | 162   | 508   | 3.1  |     |     |     | yes | PB000862.00.0 | PC000311.03.0 | PY07825 | DNA/RNA-binding protein Alba, putative                                                                                                        |
| PFE0980c           | 990   | 3057  | 3.1  |     | yes | yes |     | PB000509.03.0 | PC000750.04.0 | PY04723 | CCR4                                                                                                                                          |
| MAL8P1.104         | 209   | 640   | 3.1  |     |     | yes |     | PB001232.00.0 | PC000895.01.0 | PY01168 | CAF1 family ribonuclease, putative                                                                                                            |
| MAL13P1.338        | 167   | 505   | 3.0  |     |     |     |     | PB000127.02.0 | PC000638.04.0 | PY00080 | u1 small nuclear ribonucleoprotein putative                                                                                                   |
| PF11_0264          | 363   | 1090  | 3.0  |     |     |     | yes | PB000901.00.0 | PC000152.03.0 | PY06559 | DNA-dependent RNA polymerase                                                                                                                  |
| PF14_0436          | 225   | 676   | 3.0  |     | yes |     |     | PB000433.03.0 | NA            | PY01902 | helicase truncated putative                                                                                                                   |
| PF11_0062          | 1038  | 2954  | 2.8  |     |     | yes | yes | PB001051.00.0 | PC302253.00.0 | NA      | histone H2B                                                                                                                                   |
| PF10_0232          | 450   | 1265  | 2.8  |     | yes | yes |     | PB001011.00.0 | PC000696.01.0 | PY02297 | Chromodomain-helicase-DNA-binding protein 1 homolog, putative                                                                                 |
| MAL8P1.70          | 144   | 393   | 2.7  |     |     |     |     | PB001600.02.0 | NA            | PY03958 | Zinc finger C-x8-C-x5-C-x3-H type, putative                                                                                                   |
| PFL0145c           | 400   | 1077  | 2.7  |     |     |     |     | PB000540.03.0 | PC000607.03.0 | PY05184 | high mobility group protein, PfHMGb1                                                                                                          |
| PF14_0150          | 188   | 500   | 2.7  |     |     |     |     | PB000985.02.0 | PC000134.02.0 | PY04455 | RNA polymerase small subunit putative                                                                                                         |
| PF14_0433          | 266   | 706   | 2.7  | yes |     |     |     | PB001120.01.0 | PC000347.02.0 | PY05556 | erythrocyte membrane-like protein                                                                                                             |
| PF07_0126          | 715   | 1872  | 2.6  |     | yes | yes |     | PB000422.00.0 | PC000723.01.0 | PY01583 | transcription factor with AP2 domain(s), putative                                                                                             |
| PF11_0053          | 1139  | 2971  | 2.6  |     |     |     |     | PB000313.01.0 | PC000596.01.0 | PY02376 | PISNF2L                                                                                                                                       |
| PFE0500c           | 1245  | 3150  | 2.5  |     |     | yes |     | NA            | NA            | PY04034 | RRM and KH domain protein                                                                                                                     |
| PF11_0163          | 173   | 438   | 2.5  |     |     |     |     | PB000983.00.0 | PC001239.02.0 | PY00782 | transcription factor with AP2 domain(s), putative                                                                                             |
| PFF1185w           | 270   | 682   | 2.5  |     | yes |     |     | PB000309.00.0 | PC001116.02.0 | PY05642 | iswi protein homologue                                                                                                                        |
| PF10_0083          | 291   | 724   | 2.5  | yes |     |     |     | PB000525.02.0 | NA            | PY05712 | S1 (Kaiser et al 2004) / Zinc finger C-x8-C-x5-C-x3-H type, putative                                                                          |
| PF14_0489          | 272   | 665   | 2.4  |     | yes | yes |     | PB000549.02.0 | PC000648.02.0 | PY01626 | histone deacetylase, putative                                                                                                                 |
| PFF0200c           | 209   | 510   | 2.4  |     |     |     |     | PB300561.00.0 | PC000219.00.0 | PY05930 | transcription factor with AP2 domain(s), putative                                                                                             |
| PFI0210c           | 818   | 1994  | 2.4  |     | yes |     |     | PB000791.02.0 | PC000123.03.0 | PY01148 | CCAAT-box DNA binding protein, putative                                                                                                       |
| PFI0165c           | 434   | 1055  | 2.4  |     |     | yes |     | PB001045.00.0 | PC300325.00.0 | PY01108 | DEAD DEAH box helicase putative / protein recognized by volunteers immunized by irradiated <i>P.falciparum</i> sporozoite (Doolan et al 2003) |
| PF14_0278          | 1992  | 4745  | 2.4  |     |     | yes |     | PB000339.03.0 | PC000889.02.0 | PY01271 | ATP-dependent DNA helicase putative                                                                                                           |
| PFC0440c           | 1040  | 2466  | 2.4  |     | yes | yes |     | NA            | NA            | NA      | DEAD box helicase, putative                                                                                                                   |
| PFD0565c           | 243   | 571   | 2.3  |     | yes | yes |     | PB000982.01.0 | PC300524.00.0 | PY04868 | conserved apicomplexan protein DEAD box ATP-dependent RNA helicase, putative                                                                  |
| PF08_0055          | 244   | 568   | 2.3  | yes |     | yes |     | NA            | PC000115.01.0 | PY03839 | u3 small nucleolar ribonucleoprotein protein putative                                                                                         |
| PF14_0183          | 418   | 972   | 2.3  |     |     | yes |     | PB000865.03.0 | PC000372.05.0 | PY06632 | RNA helicase putative                                                                                                                         |
| PF10_0309          | 385   | 883   | 2.3  |     |     | yes |     | NA            | NA            | NA      | DEAD DEAH box helicase, putative                                                                                                              |
| MAL8P1.40          | 330   | 757   | 2.3  |     |     | yes |     | PB000007.00.0 | PC000004.04.0 | PY02680 | RNA-binding protein putative                                                                                                                  |
| PF07_0027          | 307   | 692   | 2.3  |     |     |     |     | PB300575.00.0 | PC000255.04.0 | PY00134 | DNA-directed RNA polymerase 2 8.2 kDa polypeptide putative                                                                                    |
| PFF1425w           | 552   | 1237  | 2.2  |     |     |     |     | NA            | PC301509.00.0 | PY04169 | RNA binding protein, putative                                                                                                                 |
| PF11_0250          | 13879 | 30709 | 2.2  |     |     |     | yes | PB000394.00.0 | PC000674.04.0 | PY03136 | high mobility group-like protein NHP2 putative                                                                                                |
| MAL7P1.21          | 511   | 1115  | 2.2  |     |     |     |     | PB000792.01.0 | PC000419.02.0 | PY03235 | origin recognition complex subunit putative                                                                                                   |
| MAL13P1.242        | 169   | 362   | 2.1  |     |     |     |     | PB001275.00.0 | NA            | PY02626 | step II splicing factor, putative                                                                                                             |
| PFC0130c           | 150   | 318   | 2.1  |     |     |     |     | PB000610.01.0 | PC000347.03.0 | PY03963 | RNA binding protein, conserved                                                                                                                |
| PFL0330c           | 171   | 360   | 2.1  |     | yes | yes |     | PB001119.03.0 | PC301400.00.0 | PY01847 | DNA-directed RNA polymerase III subunit putative                                                                                              |
| MAL8P1.72          | 193   | 406   | 2.1  |     |     | yes |     | PB001601.02.0 | PC000449.02.0 | PY07077 | high mobility group protein putative, PfHMGb2                                                                                                 |
| PF10_0047          | 389   | 819   | 2.1  |     |     |     |     | PB001621.02.0 | PC000074.04.0 | PY05537 | RNA binding protein, putative                                                                                                                 |
| PFL0465c           | 497   | 1033  | 2.1  |     |     | yes |     | PB000307.00.0 | PC000051.01.0 | PY03615 | Zinc finger transcription factor (krox1)                                                                                                      |
| PFF0350w           | 370   | 769   | 2.1  |     | yes |     |     | PB300939.00.0 | PC300643.00.0 | PY00650 | MYND finger protein                                                                                                                           |
| PFI0455w           | 2182  | 4505  | 2.1  |     | yes |     |     | PB000392.00.0 | PC000757.01.0 | PY03131 | exoribonuclease putative                                                                                                                      |
| PF13_0152          | 251   | 514   | 2.0  |     | yes |     |     | PB000839.01.0 | PC000625.00.0 | PY01554 | transcriptional regulatory protein sir2 homologue putative                                                                                    |
| PFE0090w           | 641   | 1310  | 2.0  |     | yes |     |     | PB001058.03.0 | PC000005.05.0 | PY03920 | chromosome assembly factor 1, CAF-1                                                                                                           |

|                                     |      |       |      |     |     |     |     |               |               |         |                                                                            |
|-------------------------------------|------|-------|------|-----|-----|-----|-----|---------------|---------------|---------|----------------------------------------------------------------------------|
| MAL13P1.32                          | 3157 | 6319  | 2.0  |     |     | yes | yes | PB000953.02.0 | PC000879.02.0 | PY02591 | MORN repeat containing protein                                             |
| <b>protein metabolism</b>           |      |       |      |     |     |     |     |               |               |         |                                                                            |
| PFL2095w                            | 520  | 6291  | 12,1 |     |     |     |     | PB000550.03.0 | NA            | PY01209 | Translation initiation factor SU11 putative                                |
| MAL7P1.93                           | 196  | 1602  | 8,2  |     |     | yes |     | PB000551.01.0 | PC000600.03.0 | PY05271 | mitochondrial ribosomal protein S8 putative                                |
| PF11_0313                           | 172  | 947   | 5,5  |     |     |     |     | PB000391.01.0 | PC000236.04.0 | PY00659 | 60S ribosomal protein P0                                                   |
| PF11_0212                           | 234  | 1071  | 4,6  |     | yes | yes |     | PB000097.03.0 | PC000693.01.0 | PY00891 | tRNA nucleotidyltransferase, putative                                      |
| PF14_0231                           | 615  | 2790  | 4,5  | yes |     | yes |     | PB000126.01.0 | PC000974.01.0 | PY06460 | 60S ribosomal protein L7-3, putative                                       |
| PFF1395c                            | 226  | 1014  | 4,5  |     |     | yes | yes | PB000738.01.0 | PC000003.04.0 | PY03547 | glutamyl-tRNA(Gln) amidotransferase subunit B putative                     |
| PF14_0448                           | 158  | 705   | 4,5  |     |     | yes | yes | PB001359.02.0 | PC000201.02.0 | PY06704 | 40S ribosomal protein S2, putative                                         |
| PFC1000w                            | 2962 | 11597 | 3,9  |     |     | yes |     | PB001153.01.0 | PC001221.02.0 | PY01257 | regulator of initiation factor 2 (eIF2)                                    |
| PFL0500w                            | 387  | 1391  | 3,6  |     |     | yes |     | NA            | PC000839.03.0 | PY03485 | mitochondrial ribosomal protein L1-2 precursor, putative                   |
| PFC1020c                            | 194  | 638   | 3,3  |     |     |     |     | PB001643.02.0 | PC000155.05.0 | PY02291 | 40S ribosomal protein S3A, putative                                        |
| PFL0570c                            | 400  | 1213  | 3,0  |     |     |     |     | PB000926.03.0 | PC000392.04.0 | PY01223 | mitochondrial ribosomal protein S18 precursor, putative                    |
| PF10_0183                           | 152  | 452   | 3,0  |     |     | yes |     | PB001219.02.0 | PC000654.02.0 | PY04040 | eukaryotic translation initiation factor subunit eIF2A, putative           |
| PF14_0585                           | 202  | 583   | 2,9  |     |     |     |     | PB000756.01.0 | PC000029.04.0 | PY04142 | 40S ribosomal protein S28e, putative                                       |
| PF13_0213                           | 213  | 598   | 2,8  |     |     |     |     | PB000686.02.0 | PC302562.00.0 | PY02722 | 60S ribosomal protein L6-2, putative                                       |
| PFB0175c                            | 534  | 1402  | 2,6  |     |     | yes |     | PB000405.03.0 | PC300148.00.0 | PY01531 | nucleolar preribosomal assembly protein, putative                          |
| PF10_0264                           | 156  | 402   | 2,6  |     |     | yes |     | PB000415.00.0 | PC000391.02.0 | PY06059 | 40S ribosomal protein S2B, putative                                        |
| PFC0870w                            | 7271 | 18069 | 2,5  |     |     |     |     | PB000958.03.0 | PC000580.02.0 | NA      | elongation factor 1 (EF-1), putative                                       |
| PFF1305w                            | 1004 | 2455  | 2,4  |     |     |     |     | PB000062.03.0 | PC001125.02.0 | PY04644 | mitochondrial ribosomal protein L46 precursor, putative                    |
| PFI1510w                            | 205  | 497   | 2,4  |     |     | yes |     | PB300365.00.0 | PC301601.00.0 | PY05559 | Nucleolar protein Nop52, putative                                          |
| PFL1590c                            | 261  | 626   | 2,4  |     |     | yes |     | PB001145.00.0 | PC000547.00.0 | PY04706 | elongation factor g putative                                               |
| PF14_0627                           | 167  | 386   | 2,3  |     |     | yes |     | PB000822.02.0 | PC301233.00.0 | NA      | 40S ribosomal protein S3, putative                                         |
| PFC0400w                            | 220  | 499   | 2,3  |     |     | yes | yes | PB000523.01.0 | PC000329.02.0 | PY02905 | 60S Acidic ribosomal protein P2, putative                                  |
| PF13_0268                           | 248  | 561   | 2,3  |     |     |     |     | PB001521.02.0 | PC001057.02.0 | PY00934 | 60S ribosomal protein L17, putative                                        |
| PF08_0011                           | 853  | 1859  | 2,2  |     | yes | yes | yes | PB000524.03.0 | PC000269.05.0 | PY05778 | leucine -- tRNA ligase                                                     |
| PF10_0313                           | 1516 | 3238  | 2,1  |     |     | yes | yes | PB000814.01.0 | PC000473.03.0 | PY04560 | mitochondrial preribosomal assembly protein rimM precursor, putative       |
| MAL13P1.283                         | 195  | 411   | 2,1  |     |     | yes | yes | PB001077.00.0 | PC001405.02.0 | PY02937 | TCP1 chaperonin delta subunit putative                                     |
| PFL0335c                            | 544  | 1096  | 2,0  |     |     |     |     | PB000468.02.0 | PC301070.00.0 | PY07150 | eukaryotic translation initiation factor 5 putative                        |
| <b>ubiquitin signalling pathway</b> |      |       |      |     |     |     |     |               |               |         |                                                                            |
| PF13_0346                           | 918  | 7010  | 7,6  | yes |     |     |     | PB000533.00.0 | PC000735.00.0 | NA      | 60S ribosomal protein L40/UBI, putative                                    |
| PFL0585w                            | 794  | 5982  | 7,5  | yes |     |     |     | NA            | NA            | PY03971 | PtpUB Plasmodium falciparum polyubiquitin                                  |
| PFI1545c                            | 174  | 475   | 2,7  |     |     | yes |     | PB000332.00.0 | PC000230.01.0 | PY03212 | proteasome precursor putative                                              |
| PF11_0329                           | 335  | 891   | 2,7  |     |     |     |     | PB000689.01.0 | PC000851.00.0 | PY03631 | ubiquitin-like protein                                                     |
| PFL0190w                            | 211  | 497   | 2,4  |     |     | yes |     | PB000336.03.0 | PC000554.00.0 | PY03025 | ubiquitin-conjugating enzyme e2 putative                                   |
| PF10_0174                           | 318  | 685   | 2,2  |     |     |     |     | PB001167.00.0 | PC001032.02.0 | PY02643 | 26s proteasome subunit p55 putative                                        |
| PF14_0373                           | 146  | 308   | 2,1  |     |     | yes |     | PB000018.02.0 | PC000569.04.0 | PY05634 | ubiquinol cytochrome c oxidoreductase putative                             |
| MAL8P1.122                          | 181  | 367   | 2,0  |     |     | yes |     | PB000783.03.0 | PC000216.03.0 | PY01891 | Ubiquitin regulatory protein, putative                                     |
| PFC0745c                            | 183  | 368   | 2.0  | yes |     | yes |     | PB000672.03.0 | PC000739.02.0 | PY00152 | proteasome component C8 putative                                           |
| <b>protease</b>                     |      |       |      |     |     |     |     |               |               |         |                                                                            |
| PFI0580c                            | 1132 | 11153 | 9,9  |     | yes |     | yes | PB000502.02.0 | PC000277.02.0 | NA      | Falstatin, putative                                                        |
| PF08_0108                           | 358  | 2811  | 7,9  |     | yes | yes | yes | PB001294.02.0 | PC000654.04.0 | PY06692 | pepsinogen putative                                                        |
| PFI0135c                            | 304  | 1913  | 6,3  |     | yes |     | yes | NA            | NA            | NA      | papain family cysteine protease, putative serine repeat antigen 9 (SERA-9) |
| PF11_0150                           | 693  | 2809  | 4,1  |     |     | yes |     | PB000352.00.0 | PC000773.00.0 | PY00729 | PIROM1 (Baker et al 2006)                                                  |
| PF14_0110                           | 210  | 818   | 3,9  |     |     | yes |     | PB000753.00.0 | NA            | PY00165 | rhomboid protease, putative                                                |
| PFE0340c                            | 330  | 992   | 3,0  |     |     | yes |     | PB001432.02.0 | PC000063.05.0 | PY04351 | PIROM4 (Baker et al 2006)                                                  |
| PF11_0162                           | 341  | 759   | 2,2  |     |     | yes |     | NA            | NA            | PY00783 | falcipain-3                                                                |
| PFE0355c                            | 193  | 390   | 2,0  |     |     | yes |     | PB000701.02.0 | NA            | NA      | serine protease belonging to subtilisin family, putative                   |
| <b>signalling /regulation</b>       |      |       |      |     |     |     |     |               |               |         |                                                                            |
| PF11_0139                           | 304  | 2680  | 8,8  |     |     | yes |     | PB000082.01.0 | PC000676.00.0 | PY05564 | protein tyrosine phosphatase putative                                      |
| PFE0455w                            | 1398 | 7361  | 5,3  |     |     |     |     | PB000365.01.0 | PC001010.02.0 | PY03257 | phosphatase 1 regulatory subunit, putative                                 |
| PFE0610c                            | 349  | 1767  | 5,1  |     |     |     |     | PB000948.00.0 | PC000493.01.0 | NA      | CDK-activating kinase assembly factor, putative                            |
| MAL8P1.69                           | 507  | 2327  | 4,6  |     |     |     | yes | PB000900.00.0 | PC000316.05.0 | PY01841 | 14-3-3 protein                                                             |
| PFL2325c                            | 704  | 2978  | 4,2  |     |     | yes |     | PB000244.02.0 | PC000413.04.0 | PY00378 | P. falciparum homologue of Drosophila nmda1 protein putative               |
| PF11_0225                           | 874  | 3384  | 3,9  |     |     | yes |     | PB000693.01.0 | NA            | PY06050 | PIGCN20                                                                    |
| PFA0380w                            | 278  | 995   | 3,6  |     |     | yes | yes | PB001255.02.0 | PC001368.02.0 | PY06752 | serine threonine protein kinase putative                                   |
| PFD0975w                            | 340  | 1025  | 3,0  |     |     | yes |     | PB000429.00.0 | PC000025.01.0 | PY06287 | Atypical protein kinase, RIO family, putative                              |
| PF14_0408                           | 303  | 908   | 3,0  |     |     | yes |     | PB000491.01.0 | PC000532.01.0 | PY00095 | Ser Thr protein kinase putative                                            |
| PF14_0734                           | 641  | 1882  | 2,9  |     |     | yes |     | NA            | NA            | NA      | Serine/Threonine protein kinase, FIKK family                               |
| PFB0665w                            | 248  | 675   | 2,7  |     |     | yes |     | PB000061.02.0 | PC301925.00.0 | PY06391 | serine/threonine protein kinase, putative                                  |
| PF11_0464                           | 3490 | 9431  | 2,7  |     | yes | yes | yes | PB000477.02.0 | PC000083.05.0 | PY00717 | Serine/Threonine protein kinase, putative                                  |
| PFD1180w                            | 929  | 2408  | 2,6  |     |     | yes |     | NA            | NA            | NA      | trophozoite antigen r45-like protein,truncated                             |
| PF11_0396                           | 381  | 948   | 2,5  |     |     | yes |     | PB000103.02.0 | PC000065.00.0 | PY06845 | Protein phosphatase 2C                                                     |
| PFL2250c                            | 146  | 362   | 2,5  |     |     |     |     | PB000522.03.0 | PC000605.04.0 | PY00403 | rac-beta serine/threonine protein kinase, PIPKB                            |
| PF13_0166                           | 667  | 1640  | 2,5  |     |     | yes |     | PB106157.00.0 | PC103301.00.0 | PY02207 | protein kinase putative                                                    |
| PF14_0614                           | 1202 | 2732  | 2,3  |     | yes | yes | yes | PB000092.02.0 | PC000578.04.0 | PY04404 | serine/threonine protein phosphatase, putative                             |
| MAL13P1.275                         | 241  | 503   | 2,1  |     |     |     |     | PB001065.03.0 | PC000193.04.0 | PY04698 | NLI interacting factor-like phosphatase, putative                          |
| PFI1280c                            | 712  | 1474  | 2,1  |     |     | yes | yes | PB001259.00.0 | PC000888.01.0 | PY00761 | protein kinase putative                                                    |

|                              |      |       |      |     |     |     |     |               |               |         |                                                                         |
|------------------------------|------|-------|------|-----|-----|-----|-----|---------------|---------------|---------|-------------------------------------------------------------------------|
| PF10_0311                    | 176  | 359   | 2.0  |     |     |     |     | NA            | NA            | NA      | protein phosphatase inhibitor, putative                                 |
| PF13_0011                    | 277  | 562   | 2.0  |     |     |     |     | NA            | NA            | NA      | plasmodium falciparum gamete antigen 27 25                              |
| PF07_0024                    | 260  | 527   | 2.0  |     |     |     |     | PB001142.02.0 | PC001299.02.0 | PY03237 | inositol phosphatase, putative                                          |
| transportation               |      |       |      |     |     |     |     |               |               |         |                                                                         |
| PFI1590c                     | 273  | 2430  | 8.9  |     |     | yes |     | PB000770.03.0 | PC000292.05.0 | PY04917 | CAS/CSE protein, putative                                               |
| PFA0245w                     | 114  | 911   | 8.0  |     |     | yes | yes | PB001038.01.0 | PC000510.04.0 | PY07333 | novel putative transporter, PINPT                                       |
| PFB0275w                     | 375  | 2747  | 7.3  |     |     | yes |     | PB001031.03.0 | PC000807.04.0 | PY05039 | metabolite/drug transporter Major Facilitator Superfamily, putative     |
| PFE0775c                     | 1269 | 6073  | 4.8  |     |     | yes |     | PB300327.00.0 | PC000864.01.0 | PY02168 | amino acid transporter                                                  |
| PFF1345w                     | 266  | 1196  | 4.5  |     |     | yes |     | PB000458.03.0 | PC000325.02.0 | PY02706 | transportin                                                             |
| PFD0745c                     | 331  | 1363  | 4.1  |     |     | yes |     | NA            | PC000138.04.0 | PY04027 | nonclathrin coat protein zeta2-cop-related protein, putative            |
| PF11_0461                    | 658  | 2443  | 3.7  |     |     | yes |     | PB300286.00.0 | PC000978.01.0 | PY00721 | PIRab6, GTPase                                                          |
| PFC0725c                     | 448  | 1397  | 3.1  |     |     | yes | yes | PB000183.01.0 | PC001071.02.0 | PY06388 | formate-nitrate transporter, putative                                   |
| PF14_0679                    | 368  | 1075  | 2.9  |     |     | yes |     | PB000598.03.0 | PC000144.02.0 | PY07224 | inorganic anion exchanger, inorganic anion antiporter                   |
| PF14_0654                    | 367  | 1029  | 2.8  |     |     | yes |     | NA            | NA            | NA      | aminophospholipid transporter activity                                  |
| PF11_0310                    | 195  | 524   | 2.7  |     |     | yes |     | PB000390.01.0 | PC301882.00.0 | PY02129 | transporter putative                                                    |
| PF13_0124                    | 161  | 417   | 2.6  |     |     | yes |     | PB000044.02.0 | PC302473.00.0 | PY06857 | SFT2=like protein                                                       |
| PFA0375c                     | 254  | 656   | 2.6  |     |     | yes | yes | PB001237.02.0 | PC000233.03.0 | PY03953 | lipidsterol:H+ symporter                                                |
| PF13_0174                    | 179  | 422   | 2.4  |     |     | yes |     | PB000322.02.0 | PC000246.01.0 | PY05729 | P. falciparum homologue of human mbp-1 interacting protein-2a; putative |
| MAL8P1.51                    | 356  | 820   | 2.3  |     |     | yes |     | NA            | NA            | NA      | protein-transport protein sec61 beta 1 subunit, putative                |
| PFE1455w                     | 4195 | 9641  | 2.3  |     |     | yes |     | NA            | NA            | NA      | sugar transporter, putative                                             |
| PF13_0358                    | 146  | 337   | 2.3  |     |     |     |     | PB001078.03.0 | PC000028.03.0 | PY05705 | mitochondrial import inner membrane translocase, putative               |
| PFA0310c                     | 191  | 437   | 2.3  |     |     | yes |     | PB000675.00.0 | PC301192.00.0 | PY05776 | calcium-transporting ATPase                                             |
| PF10_0366                    | 1507 | 3435  | 2.3  |     |     | yes | yes | PB001072.01.0 | PC000019.01.0 | PY03882 | ADPATP transporter on adenylate translocase                             |
| PF13_0324                    | 348  | 762   | 2.2  |     |     |     |     | PB001372.02.0 | PC300976.00.0 | PY01094 | Sec24 subunit, putative                                                 |
| PF11_0258                    | 622  | 1354  | 2.2  | yes |     |     |     | PB300486.00.0 | PC000284.03.0 | PY00817 | co-chaperone GrpE, putative                                             |
| PFL0785c                     | 244  | 518   | 2.1  |     |     |     |     | PB001194.02.0 | NA            | PY05584 | signal recognition particle 19 kd protein, putative                     |
| PFE1195w                     | 321  | 677   | 2.1  |     |     | yes | yes | PB001230.00.0 | PC000072.05.0 | PY00155 | karyopherin beta                                                        |
| PF14_0221                    | 733  | 1520  | 2.1  | yes |     |     | yes | PB000271.02.0 | PC000122.02.0 | PY00019 | GTPase of unknown function, putative                                    |
| cytoskeleton                 |      |       |      |     |     |     |     |               |               |         |                                                                         |
| PF11_0431                    | 740  | 2573  | 3.5  |     |     |     |     | PB000461.01.0 | PC301320.00.0 | PY03535 | membrane skeletal protein putative                                      |
| PFL2215w                     | 405  | 1405  | 3.5  |     |     | yes | yes | PB000323.01.0 | NA            | PY02240 | actin                                                                   |
| PFC0860w                     | 498  | 1456  | 2.9  |     |     | yes |     | PB000348.03.0 | PC000825.01.0 | PY00972 | kinesin, putative                                                       |
| PFE0175c                     | 356  | 994   | 2.8  | yes |     | yes | yes | PB000366.02.0 | PC000242.02.0 | PY00345 | unconventional myosin pfm-b                                             |
| PF13_0233                    | 456  | 1117  | 2.4  |     |     | yes | yes | PB001069.00.0 | PC001166.02.0 | PY01232 | myosin a                                                                |
| PF14_0222                    | 545  | 1301  | 2.4  |     |     |     | yes | PB000272.02.0 | PC000123.02.0 | PY00018 | Ankyrin, putative                                                       |
| PF14_0202                    | 175  | 406   | 2.3  |     |     |     |     | PB000808.00.0 | PC000364.02.0 | NA      | dynein-associated protein, putative                                     |
| PFC0165w                     | 450  | 1000  | 2.2  |     |     |     |     | PB001240.02.0 | PC000020.05.0 | PY00501 | spindle pole body protein, putative                                     |
| PFI1080w                     | 236  | 491   | 2.1  |     |     | yes |     | PB001113.01.0 | PC001267.02.0 | PY00184 | dynein intermediate chain 2, ciliary                                    |
| stress response              |      |       |      |     |     |     |     |               |               |         |                                                                         |
| PF08_0054                    | 639  | 15606 | 24.4 | yes |     | yes | yes | PB000817.02.0 | PC000186.01.0 | PY06158 | heat shock 70 kDa protein                                               |
| PF07_0029                    | 304  | 5761  | 19.0 | yes |     | yes | yes | PB300823.00.0 | PC000221.01.0 | PY00131 | heat shock protein 86                                                   |
| PFL0565w                     | 194  | 1383  | 7.1  |     |     |     |     | PB000927.03.0 | PC000656.04.0 | PY01224 | heat shock protein DNAJ homologue Pfj4                                  |
| PFI0875w                     | 1118 | 6610  | 5.9  |     | yes | yes | yes | PB001177.00.0 | PC300345.00.0 | PY05001 | Heat shock protein                                                      |
| PF11_0351                    | 239  | 968   | 4.1  |     |     | yes | yes | PB001074.01.0 | PC001357.02.0 | PY06981 | heat shock protein hsp70 homologue                                      |
| PF11_0175                    | 194  | 717   | 3.7  |     | yes | yes | yes | PB001190.00.0 | PC000279.05.0 | PY05364 | heat shock protein 101 putative                                         |
| PFE1605w                     | 766  | 2504  | 3.3  |     |     | yes |     | NA            | NA            | NA      | protein with DNAJ domain /PHIST domain protein                          |
| PFC0360w                     | 122  | 363   | 3.0  |     |     |     |     | PB000835.01.0 | PC000094.03.0 | NA      | Activator of Hsp90 ATPase homolog 1-like protein, putative              |
| PF11_0099                    | 287  | 807   | 2.8  |     | yes | yes |     | PB001000.01.0 | PC301594.00.0 | PY07174 | heat shock protein DnaJ homologue Pfj2                                  |
| PFF1130c                     | 294  | 704   | 2.4  |     | yes |     | yes | PB000741.00.0 | PC000388.01.0 | PY04892 | superoxide dismutase, PISOD2                                            |
| PF14_0137                    | 970  | 2307  | 2.4  |     |     | yes |     | PB000205.01.0 | PC000928.01.0 | PY05607 | protein with DNAJ domain                                                |
| PF10_0378                    | 474  | 967   | 2.0  |     |     | yes |     | NA            | NA            | NA      | RESA-like protein with PHIST and DnaJ domains                           |
| PF14_0013                    | 677  | 1372  | 2.0  |     |     | yes |     | NA            | NA            | NA      | DnaJ protein, putative                                                  |
| PF11_0273                    | 145  | 288   | 2.0  |     |     | yes |     | NA            | NA            | NA      | DnaJ protein, putative                                                  |
| PF14_0700                    | 196  | 393   | 2.0  |     |     |     |     | PB000935.01.0 | PC000353.05.0 | PY03688 | DnaJ protein, putative                                                  |
| blood stage surface proteins |      |       |      |     |     |     |     |               |               |         |                                                                         |
| PFF1555w                     | 288  | 1642  | 5.7  |     | yes | yes |     | NA            | NA            | NA      | rifin                                                                   |
| PF13_0193                    | 516  | 2890  | 5.6  |     | yes |     |     | NA            | NA            | NA      | MSP7-like protein                                                       |
| PF14_0201                    | 212  | 964   | 4.5  |     | yes | yes | yes | PB000807.00.0 | PC000379.04.0 | PY05715 | surface protein, putative, Pf113                                        |
| PFF0620c                     | 200  | 888   | 4.4  |     | yes | yes |     | PB000527.00.0 | PC000586.03.0 | PY03099 | Pfs45-48 related protein, putative                                      |
| PFD0100c                     | 340  | 1110  | 3.3  |     |     |     | yes | NA            | NA            | NA      | surface-associated interspersed gene 4.1, (SURFIN4.1)                   |
| MAL7P1.12                    | 257  | 711   | 2.8  |     |     | yes |     | PB000800.03.0 | PC000194.03.0 | PY00683 | erythrocyte membrane-associated antigen                                 |
| MAL7P1.12                    | 224  | 612   | 2.7  |     |     | yes |     | PB000800.03.0 | PC000194.03.0 | PY00683 | erythrocyte membrane-associated antigen                                 |
| PFB0935w                     | 297  | 782   | 2.6  |     | yes | yes |     | NA            | NA            | NA      | cytoadherence linked asexual protein 2                                  |
| PFF0020c                     | 248  | 627   | 2.5  |     |     | yes |     | NA            | NA            | NA      | Plasmodium falciparum var-like protein                                  |
| MAL7P1.1                     | 145  | 367   | 2.5  |     |     | yes |     | NA            | NA            | NA      | erythrocyte membrane protein 1 (PIEMP1)                                 |
| PF10_0003                    | 290  | 721   | 2.5  |     | yes | yes |     | NA            | NA            | NA      | rifin                                                                   |
| PFF1540w                     | 287  | 674   | 2.3  |     |     | yes |     | NA            | NA            | NA      | RIF pseudogene                                                          |
| PFC1070c                     | 557  | 1233  | 2.2  |     |     |     |     | NA            | NA            | NA      | VARC pseudogene                                                         |

|                                  |        |        |      |     |     |     |     |               |               |         |                                                                           |
|----------------------------------|--------|--------|------|-----|-----|-----|-----|---------------|---------------|---------|---------------------------------------------------------------------------|
| MAL7P1.7                         | 617    | 1327   | 2,2  |     |     | yes |     | NA            | NA            | NA      | RESA-like protein/ PHIST domain protein                                   |
| PFL0935c                         | 285    | 602    | 2,1  |     |     | yes |     | NA            | NA            | NA      | erythrocyte membrane protein 1 (PIEMP1)                                   |
| PFA0765c                         | 910    | 1895   | 2,1  |     |     | yes |     | NA            | NA            | NA      | erythrocyte membrane protein 1 (PIEMP1)                                   |
| parasitophorous vacuole proteins |        |        |      |     |     |     |     |               |               |         |                                                                           |
| MAL8P1.6                         | 467    | 13807  | 29,6 |     |     | yes |     | NA            | NA            | NA      | early transcribed membrane protein 8, ETRAMP 8 (Spielmann et al 2003)     |
| PFL0065w                         | 395    | 11094  | 28,1 |     | yes | yes |     | NA            | NA            | NA      | LSAP-1                                                                    |
| PF14_0729                        | 308    | 5102   | 16,6 |     |     | yes |     | NA            | NA            | NA      | etramp14.2 (Spielmann et al 2003)                                         |
| PFB0105c                         | 611    | 8550   | 14,0 |     |     | yes |     | NA            | NA            | NA      | LSAP-2/ PHIST domain protein                                              |
| PF10_0164                        | 714    | 4459   | 6,2  |     | yes | yes |     | NA            | NA            | NA      | etramp10.3 (Spielmann et al 2003)/ UIS4 (Mueller et al 2005)              |
| PF14_0678                        | 967    | 5684   | 5,9  |     |     | yes |     | PB000390.00.0 | PC000056.05.0 | PY05892 | exported protein 2 (Fisher et al 1998)                                    |
| PF13_0012                        | 205    | 883    | 4,3  | yes | yes | yes |     | PB000892.03.0 | PC000203.01.0 | PY03011 | etramp13 (Splieman et al 2003)/UIS3 (Mikolajczak et al 2007)              |
| PFD1120c                         | 245    | 737    | 3,0  |     |     | yes |     | NA            | NA            | NA      | etramp4 (Spielmann et al 2003)                                            |
| PF11_0224                        | 344    | 936    | 2,7  |     |     | yes |     | PB000484.01.0 | PC000214.05.0 | PY04421 | circumsporozoite-related antigen / exported protein 1 (Doolan et al 1996) |
| PF10_0344                        | 277    | 586    | 2,1  |     |     | yes | yes | NA            | NA            | NA      | glutamate-rich protein /pGLURP (Borre et al 1991)                         |
| hypothetical proteins            |        |        |      |     |     |     |     |               |               |         |                                                                           |
| PF08_0119                        | 1236   | 20913  | 16,9 |     |     |     |     | PB000508.03.0 | PC000587.00.0 | NA      | hypothetical protein, conserved                                           |
| PF10_0190                        | 153    | 1650   | 10,8 |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF14_0046                        | 250    | 2506   | 10,0 |     | yes |     |     | NA            | NA            | NA      | hypothetical conserved in Plasmodium species                              |
| PF11_0340                        | 319    | 2587   | 8,1  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF13_0203                        | 925    | 7484   | 8,1  |     | yes |     |     | PB104029.00.0 | PC405853.00.0 | NA      | hypothetical protein                                                      |
| PFE0990w                         | 197    | 1244   | 6,3  |     |     |     |     | PB000706.03.0 | NA            | PY00700 | hypothetical protein, conserved                                           |
| PF14_0336                        | 562    | 3000   | 5,3  |     |     |     |     | NA            | NA            | PY05583 | hypothetical protein                                                      |
| PFC0615w                         | 446    | 2358   | 5,3  |     |     |     |     | PB000077.03.0 | NA            | PY07280 | hypothetical protein                                                      |
| PF11_0499                        | 72624  | 373683 | 5,1  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF08_0082                        | 201    | 1023   | 5,1  |     |     |     | yes | PB000301.02.0 | NA            | PY05997 | hypothetical protein                                                      |
| PF08_0083                        | 224    | 1031   | 4,6  |     |     |     |     | PB000460.03.0 | NA            | PY03189 | hypothetical protein                                                      |
| PFI0325c                         | 242    | 1114   | 4,6  |     |     |     |     | PB300478.00.0 | PC000617.00.0 | NA      | hypothetical protein                                                      |
| PF13_0288                        | 674    | 2875   | 4,3  | yes |     |     |     | PB001076.02.0 | PC000662.00.0 | NA      | hypothetical protein                                                      |
| PFA0360c                         | 300    | 1267   | 4,2  |     | yes |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF10_0060                        | 933    | 3911   | 4,2  |     | yes |     |     | PB000475.03.0 | PC001364.02.0 | PY06601 | hypothetical protein                                                      |
| PF14_0080                        | 344    | 1433   | 4,2  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PFE0115c                         | 312    | 1291   | 4,1  |     |     |     | yes | NA            | PC000724.04.0 | NA      | hypothetical protein                                                      |
| PF14_0621                        | 258    | 1044   | 4,0  |     |     |     |     | PB000781.03.0 | PC000515.01.0 | PY01369 | hypothetical protein                                                      |
| PF11_0497                        | 140465 | 561120 | 4,0  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PFL1770c                         | 309    | 1220   | 3,9  |     |     |     | yes | PB000156.01.0 | PC000341.01.0 | PY05543 | hypothetical protein                                                      |
| MAL13P1.125                      | 252    | 975    | 3,9  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PFA0135w                         | 157    | 601    | 3,8  |     | yes |     |     | NA            | NA            | NA      | Merozoite-associated tryptophan-rich antigen, putative                    |
| PFE1500c                         | 811    | 3065   | 3,8  |     |     |     |     | NA            | PC100686.00.0 | NA      | hypothetical protein                                                      |
| PFE1100w                         | 154    | 580    | 3,8  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF10_0357                        | 6572   | 24359  | 3,7  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| MAL7P1.160                       | 413    | 1519   | 3,7  |     |     |     |     | NA            | PC000211.01.0 | NA      | hypothetical protein                                                      |
| PF13_0167                        | 352    | 1269   | 3,6  |     |     |     |     | PB404030.00.0 | NA            | PY00481 | hypothetical protein                                                      |
| PFI1270w                         | 275    | 984    | 3,6  |     | yes |     |     | PB000110.02.0 | NA            | PY00763 | hypothetical protein                                                      |
| PF13_0058                        | 1413   | 5034   | 3,6  |     |     |     | yes | PB300785.00.0 | PC000772.00.0 | PY02798 | hypothetical protein                                                      |
| PFF0525w                         | 168    | 600    | 3,6  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF11_0418                        | 190    | 675    | 3,6  |     |     |     |     | PB000851.03.0 | PC102167.00.0 | NA      | hypothetical protein                                                      |
| MAL7P1.125                       | 347    | 1218   | 3,5  |     |     |     |     | PB000811.01.0 | PC000195.01.0 | PY02049 | hypothetical protein                                                      |
| PF11_0494                        | 17658  | 61213  | 3,5  |     |     |     |     | NA            | PC300798.00.0 | NA      | hypothetical protein                                                      |
| PF11_0253                        | 194    | 670    | 3,5  |     |     |     |     | PB301523.00.0 | PC000624.02.0 | NA      | hypothetical protein                                                      |
| PFL1765c                         | 240    | 808    | 3,4  |     |     |     |     | PB000388.00.0 | NA            | PY06122 | hypothetical protein                                                      |
| PFE0615w                         | 295    | 986    | 3,3  |     |     |     |     | NA            | PC106709.00.0 | PY03183 | hypothetical protein                                                      |
| MAL13P1.182                      | 292    | 954    | 3,3  |     |     |     |     | PB001042.01.0 | PC000515.03.0 | PY01503 | hypothetical protein, conserved                                           |
| MAL8P1.8                         | 182    | 592    | 3,3  |     |     |     |     | PB000506.01.0 | PC000739.04.0 | PY06580 | hypothetical protein                                                      |
| PF14_0344                        | 4602   | 14792  | 3,2  | yes |     |     | yes | PB000730.02.0 | PC000742.04.0 | PY02301 | hypothetical protein                                                      |
| PFF1310c                         | 158    | 500    | 3,2  |     |     |     |     | NA            | PC001126.02.0 | NA      | hypothetical protein                                                      |
| MAL13P1.24                       | 170    | 535    | 3,1  |     | yes |     |     | PB000071.01.0 | PC000080.03.0 | PY07311 | hypothetical protein                                                      |
| PF10_0170                        | 340    | 1047   | 3,1  |     |     |     |     | NA            | PC000204.05.0 | PY02639 | hypothetical protein                                                      |
| PF11_0322                        | 310    | 952    | 3,1  |     |     |     | yes | NA            | PC300184.00.0 | PY06085 | hypothetical protein                                                      |
| PF13_0161                        | 1906   | 5813   | 3,0  |     |     |     |     | PB000553.03.0 | PC000775.02.0 | PY00261 | hypothetical protein                                                      |
| PF14_0089                        | 614    | 1862   | 3,0  |     |     |     |     | NA            | NA            | PY03352 | hypothetical protein                                                      |
| PF11_0302                        | 306    | 915    | 3,0  |     | yes |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF14_0461                        | 6158   | 18306  | 3,0  |     |     |     | yes | NA            | PC000800.03.0 | NA      | hypothetical protein                                                      |
| PF07_0044                        | 408    | 1186   | 2,9  |     |     |     |     | PB000240.00.0 | PC103612.00.0 | PY04862 | hypothetical protein                                                      |
| PF14_0044                        | 219    | 635    | 2,9  |     | yes |     |     | PB000264.00.0 | PC300261.00.0 | PY06764 | S11 (Kaiser et al 2004)                                                   |
| PFL0845w                         | 407    | 1177   | 2,9  |     |     |     |     | PB000694.01.0 | PC000170.02.0 | PY04727 | hypothetical protein                                                      |
| PF14_0684                        | 421    | 1216   | 2,9  |     |     |     |     | NA            | NA            | NA      | hypothetical protein                                                      |
| PF14_0093                        | 1540   | 4442   | 2,9  |     |     |     | yes | NA            | NA            | NA      | hypothetical protein                                                      |
| PF14_0490                        | 2908   | 8351   | 2,9  |     |     |     |     | PB001087.00.0 | PC000649.02.0 | PY01625 | hypothetical protein                                                      |

|             |       |       |     |     |     |     |     |               |               |         |                                    |
|-------------|-------|-------|-----|-----|-----|-----|-----|---------------|---------------|---------|------------------------------------|
| PF14_0140   | 243   | 681   | 2.8 |     |     |     |     | PB000384.00.0 | PC000163.04.0 | PY03289 | hypothetical protein               |
| PF11075w    | 581   | 1616  | 2.8 |     |     |     |     | NA            | PC103190.00.0 | NA      | hypothetical protein               |
| PF11_0526   | 2007  | 5569  | 2.8 |     |     |     |     | NA            | PC000254.03.0 | NA      | hypothetical protein               |
| PF14_0707   | 696   | 1903  | 2.7 |     |     |     |     | PB000387.00.0 | NA            | PY05083 | hypothetical protein               |
| PF11_0118   | 397   | 1079  | 2.7 |     |     |     |     | PB000660.02.0 | PC001396.02.0 | PY02705 | hypothetical protein               |
| PFL0795c    | 368   | 1000  | 2.7 |     | yes |     |     | PB000248.02.0 | PC000315.05.0 | PY00179 | plmvd, male development gene       |
| PFD0785c    | 568   | 1533  | 2.7 |     |     |     |     | PB300755.00.0 | PC000236.02.0 | NA      | hypothetical protein               |
| PF13_0200   | 723   | 1942  | 2.7 |     |     |     |     | PB000375.03.0 | PC000405.02.0 | PY03051 | hypothetical protein               |
| PF11_0166   | 230   | 618   | 2.7 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF11_0473   | 233   | 625   | 2.7 |     |     |     |     | PB000941.03.0 | PC000759.01.0 | PY03510 | hypothetical protein               |
| PFL1175w    | 455   | 1216  | 2.7 |     |     |     |     | PB000904.03.0 | PC000213.00.0 | PY05853 | hypothetical protein               |
| PFC0215c    | 188   | 497   | 2.6 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF10_0231   | 464   | 1215  | 2.6 |     |     |     |     | PB300797.00.0 | PC000436.00.0 | PY02296 | hypothetical protein               |
| PFL2025w    | 200   | 522   | 2.6 |     |     |     |     | PB000043.03.0 | PC000282.02.0 | PY01489 | hypothetical protein               |
| PF08_0118   | 2220  | 5769  | 2.6 |     |     |     |     | PB000507.03.0 | PC300547.00.0 | PY05558 | hypothetical protein               |
| PF11235w    | 258   | 670   | 2.6 | yes |     |     |     | PB000907.02.0 | PC000856.01.0 | PY00928 | hypothetical protein               |
| PF10_0204   | 176   | 455   | 2.6 |     |     |     |     | PB001641.02.0 | PC000478.00.0 | PY03164 | hypothetical protein               |
| PF14_0665   | 546   | 1408  | 2.6 |     |     |     |     | PB000495.02.0 | PC000205.05.0 | PY01696 | hypothetical protein               |
| PF11_0406   | 320   | 820   | 2.6 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PFC0555c    | 898   | 2290  | 2.6 |     |     |     |     | PB000259.00.0 | PC000760.00.0 | PY03661 | hypothetical protein               |
| PF14_0685   | 196   | 491   | 2.5 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF14_0715   | 316   | 786   | 2.5 |     |     |     |     | PB000784.03.0 | PC000561.04.0 | PY00266 | hypothetical protein               |
| PF13_0160   | 155   | 379   | 2.4 |     |     |     |     | PB000554.03.0 | PC301602.00.0 | NA      | hypothetical protein               |
| PFA0305c    | 258   | 631   | 2.4 |     |     |     |     | NA            | PC000804.03.0 | PY05775 | hypothetical protein               |
| PFA0210c    | 235   | 571   | 2.4 |     | yes |     |     | PB300987.00.0 | NA            | PY06307 | hypothetical protein               |
| MAL13P1.331 | 223   | 542   | 2.4 |     |     |     |     | NA            | NA            | PY05033 | hypothetical protein conserved     |
| PFD0900w    | 282   | 683   | 2.4 |     |     |     |     | NA            | PC000330.01.0 | PY06816 | hypothetical protein               |
| PF10_0342   | 747   | 1799  | 2.4 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF11_0415   | 470   | 1124  | 2.4 |     |     |     |     | PB000010.01.0 | PC000423.00.0 | PY00530 | hypothetical protein               |
| PF14_0713   | 216   | 513   | 2.4 |     |     |     |     | PB000964.02.0 | PC301612.00.0 | PY02637 | hypothetical protein               |
| PFF1230c    | 501   | 1185  | 2.4 |     | yes |     |     | NA            | PC000158.00.0 | PY02327 | hypothetical protein               |
| PFD0010w    | 252   | 594   | 2.4 |     |     |     |     | NA            | NA            | NA      | unknown                            |
| PF11_0320   | 12380 | 28928 | 2.3 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF13_0204   | 235   | 550   | 2.3 |     |     |     |     | PB000571.02.0 | PC301210.00.0 | PY06251 | nuclear movement protein, putative |
| PF13_0191   | 775   | 1805  | 2.3 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF13_0295   | 204   | 472   | 2.3 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF11_0209   | 552   | 1271  | 2.3 |     |     | yes |     | PB000141.01.0 | NA            | PY00888 | hypothetical protein               |
| PFB0775w    | 613   | 1412  | 2.3 |     |     |     |     | NA            | PC000481.00.0 | PY04634 | hypothetical protein               |
| PF11_0033   | 165   | 380   | 2.3 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF07_0120   | 337   | 759   | 2.3 |     |     |     |     | PB000175.01.0 | PC000650.02.0 | PY01476 | hypothetical protein               |
| PFF0165c    | 224   | 504   | 2.3 |     |     |     |     | PB001170.02.0 | PC000690.00.0 | PY02581 | hypothetical protein               |
| PFC0910w    | 200   | 448   | 2.2 |     |     |     |     | PB300241.00.0 | PC000219.04.0 | PY05269 | hypothetical protein               |
| PFE0780w    | 999   | 2234  | 2.2 |     |     |     |     | PB000695.03.0 | PC000751.01.0 | PY02013 | hypothetical protein               |
| MAL13P1.180 | 217   | 485   | 2.2 | yes |     |     |     | PB402792.00.0 | PC102239.00.0 | NA      | hypothetical protein               |
| PF10_0180   | 1445  | 3205  | 2.2 | yes |     |     |     | PB000170.02.0 | PC301007.00.0 | PY02493 | hypothetical protein               |
| PF11_0365   | 413   | 914   | 2.2 |     |     |     |     | PB001098.02.0 | PC300229.00.0 | PY03003 | hypothetical protein               |
| PF11_0501   | 38485 | 85105 | 2.2 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PFE1425c    | 145   | 322   | 2.2 |     |     |     |     | NA            | NA            | PY00692 | hypothetical protein               |
| PF14_0390   | 1188  | 2615  | 2.2 |     |     |     |     | NA            | NA            | PY05640 | hypothetical protein               |
| PFF0840w    | 212   | 467   | 2.2 |     |     |     |     | PB000604.01.0 | PC302191.00.0 | PY05077 | hypothetical protein               |
| PF11_0462   | 297   | 652   | 2.2 |     |     |     |     | NA            | PC000709.02.0 | NA      | hypothetical protein               |
| PF14_0426   | 209   | 455   | 2.2 |     |     |     |     | PB107642.00.0 | NA            | NA      | hypothetical protein               |
| PFI0715w    | 198   | 430   | 2.2 |     |     |     |     | PB000461.03.0 | NA            | PY06377 | Zinc binding protein, putative     |
| PFL0105w    | 633   | 1360  | 2.1 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF14_0176   | 256   | 549   | 2.1 |     |     |     | yes | PB000252.00.0 | PC106247.00.0 | PY01646 | hypothetical protein               |
| PFD0920w    | 312   | 667   | 2.1 |     |     |     | yes | NA            | PC300097.00.0 | NA      | hypothetical protein               |
| PF11_0402   | 366   | 776   | 2.1 |     |     |     |     | PB000321.01.0 | PC000753.01.0 | PY05866 | hypothetical protein               |
| MAL8P1.95   | 477   | 1010  | 2.1 | yes |     |     | yes | PB000840.00.0 | PC302359.00.0 | PY00457 | hypothetical protein               |
| PF11_0160   | 189   | 397   | 2.1 |     |     |     | yes | PB000981.00.0 | PC000782.00.0 | PY00784 | hypothetical protein               |
| PF10_0296   | 437   | 917   | 2.1 |     |     |     |     | NA            | PC000130.02.0 | PY04570 | hypothetical protein               |
| PF14_0236   | 363   | 762   | 2.1 |     |     |     | yes | NA            | NA            | NA      | hypothetical protein               |
| PF14_0339   | 528   | 1102  | 2.1 |     |     |     |     | PB300666.00.0 | PC301098.00.0 | PY00616 | hypothetical protein               |
| PF11_0289   | 2216  | 4620  | 2.1 |     |     |     |     | PB000435.00.0 | PC000031.02.0 | PY03552 | hypothetical protein               |
| PF13_0194   | 179   | 374   | 2.1 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein               |
| PF10_0234   | 408   | 842   | 2.1 |     |     |     | yes | PB000312.02.0 | NA            | PY01460 | hypothetical protein               |
| PF13_0339   | 498   | 1025  | 2.1 |     |     |     |     | PB000361.02.0 | PC000252.05.0 | PY00836 | hypothetical protein               |
| PFC0690c    | 305   | 627   | 2.1 | yes |     |     | yes | PB000588.01.0 | PC000431.02.0 | PY05938 | hypothetical protein               |
| PF14_0238   | 24997 | 51289 | 2.1 |     |     |     |     | NA            | NA            | NA      | hypothetical protein               |
| PFE0315c    | 183   | 375   | 2.0 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein               |

|                                     |      |       |     |     |     |     |     |               |               |         |                                           |
|-------------------------------------|------|-------|-----|-----|-----|-----|-----|---------------|---------------|---------|-------------------------------------------|
| PF14_0219                           | 320  | 654   | 2.0 |     |     |     |     | NA            | NA            | NA      | hypothetical protein                      |
| PFL0910c                            | 254  | 518   | 2.0 |     |     |     |     | NA            | PC000648.00.0 | NA      | hypothetical protein                      |
| PFI0915w                            | 2539 | 5164  | 2.0 |     |     |     |     | NA            | NA            | NA      | hypothetical protein                      |
| PF14_0427                           | 200  | 406   | 2.0 |     |     |     |     | PB000454.03.0 | PC302439.00.0 | PY03707 | hypothetical protein                      |
| PF10_0156                           | 241  | 489   | 2.0 |     |     |     |     | PB000457.03.0 | PC000113.01.0 | PY06645 | hypothetical protein                      |
| PFI0675w                            | 362  | 732   | 2.0 |     |     |     |     | NA            | NA            | NA      | hypothetical protein                      |
| PFD0480w                            | 445  | 900   | 2.0 |     | yes |     |     | PB300840.00.0 | PC300699.00.0 | PY04089 | hypothetical protein                      |
| PF11_0378                           | 209  | 420   | 2.0 |     |     |     |     | PB000288.02.0 | PC000776.03.0 | PY05749 | hypothetical protein                      |
| PFF0635w                            | 267  | 536   | 2.0 |     | yes |     |     | NA            | NA            | NA      | hypothetical protein                      |
| PFF1295w                            | 189  | 379   | 2.0 |     |     |     |     | PB000191.03.0 | PC000381.04.0 | PY07532 | hypothetical protein conserved            |
| hypothetical transmembrane proteins |      |       |     |     |     |     |     |               |               |         |                                           |
| PFL1430c                            | 246  | 2405  | 9.8 |     |     | yes |     | PB000347.03.0 | PC000466.01.0 | PY07335 | hypothetical protein                      |
| PF14_0467                           | 682  | 5504  | 8.1 |     | yes | yes | yes | PB000658.00.0 | PC301505.00.0 | PY05966 | hypothetical protein                      |
| PFF1315w                            | 315  | 2240  | 7.1 |     |     | yes |     | PB000068.01.0 | PC000487.03.0 | PY04642 | hypothetical protein with ankyrin repeats |
| PFL0655w                            | 592  | 4175  | 7.1 |     | yes | yes |     | PB000768.01.0 | PC302586.00.0 | PY02015 | hypothetical protein                      |
| PF11_0149                           | 726  | 4648  | 6.4 |     |     | yes |     | PB000355.00.0 | PC000774.00.0 | NA      | hypothetical protein                      |
| PF14_0250                           | 181  | 1092  | 6.0 |     | yes | yes |     | PB000864.01.0 | PC300698.00.0 | PY07137 | hypothetical protein                      |
| PFL0085c                            | 268  | 1544  | 5.8 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| MAL13P1.149                         | 201  | 1117  | 5.6 |     |     | yes |     | PB000841.01.0 | PC000409.01.0 | NA      | hypothetical protein                      |
| PF10_0126                           | 333  | 1827  | 5.5 |     |     | yes |     | PB000639.03.0 | PC000639.00.0 | PY01361 | hypothetical protein conserved            |
| PFA0200w                            | 340  | 1854  | 5.5 | yes |     | yes | yes | PB000881.01.0 | PC000759.00.0 | PY07092 | S21 / TRSP (Kaiser et al 2004)            |
| PF14_0582                           | 689  | 3700  | 5.4 |     |     | yes |     | NA            | NA            | PY05163 | hypothetical protein                      |
| PFF0575c                            | 175  | 922   | 5.3 |     |     | yes |     | PB000579.01.0 | NA            | NA      | hypothetical protein                      |
| PFE0360c                            | 540  | 2798  | 5.2 |     |     | yes |     | PB001289      | PC001277.02.0 | NA      | hypothetical protein                      |
| PFI1230c                            | 354  | 1801  | 5.1 |     |     | yes |     | PB000780.01.0 | PC000461.00.0 | PY00930 | hypothetical protein                      |
| PFL0915c                            | 690  | 3465  | 5.0 |     | yes | yes |     | PB000938.02.0 | PC000139.00.0 | NA      | hypothetical protein                      |
| PF10_0283                           | 3010 | 14670 | 4.9 |     |     | yes |     | PB401461.00.0 | PC000056.04.0 | PY07110 | hypothetical protein                      |
| PFL0445w                            | 382  | 1852  | 4.8 |     |     | yes |     | PB000558.02.0 | PC000250.05.0 | PY03793 | hypothetical protein                      |
| MAL8P1.7                            | 205  | 991   | 4.8 |     |     | yes | yes | NA            | NA            | NA      | hypothetical protein                      |
| PFE0365c                            | 191  | 897   | 4.7 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PFI0145w                            | 827  | 3720  | 4.5 |     |     | yes |     | PB000108.02.0 | NA            | PY01822 | hypothetical protein                      |
| MAL13P1.268                         | 232  | 1042  | 4.5 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PF10_0018                           | 117  | 524   | 4.5 |     | yes | yes |     | NA            | NA            | NA      | alpha/beta hydrolase protein, putative    |
| PF07_0067                           | 486  | 2170  | 4.5 |     |     | yes |     | PB000148.01.0 | PC000489.04.0 | PY01027 | hypothetical protein                      |
| PFB0225c                            | 2198 | 9794  | 4.5 |     |     | yes | yes | NA            | NA            | NA      | hypothetical protein                      |
| PFI0140w                            | 4144 | 18333 | 4.4 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PFB0485c                            | 222  | 935   | 4.2 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PF13_0116                           | 283  | 1181  | 4.2 |     | yes | yes |     | PB000489.00.0 | PC000040.04.0 | PY03873 | hypothetical protein                      |
| PFI1675w                            | 233  | 963   | 4.1 |     |     | yes |     | NA            | PC001412.02.0 | PY05237 | hypothetical protein                      |
| PFC0240c                            | 187  | 740   | 4.0 |     |     | yes |     | PB000797.03.0 | PC000645.01.0 | PY05028 | hypothetical protein                      |
| MAL13P1.179                         | 236  | 899   | 3.8 |     |     | yes |     | PB105832.00.0 | PC000837.02.0 | PY01509 | hypothetical protein                      |
| MAL13P1.141                         | 129  | 476   | 3.7 |     |     | yes |     | PB000243.03.0 | PC000393.05.0 | PY02849 | hypothetical protein                      |
| PF13_0064                           | 235  | 865   | 3.7 |     |     | yes | yes | PB000846.02.0 | PC301610.00.0 | PY02806 | hypothetical protein                      |
| PFI0670w                            | 1007 | 3650  | 3.6 |     |     | yes |     | PB001112.01.0 | PC000704.04.0 | PY02480 | hypothetical protein conserved            |
| MAL13P1.94                          | 402  | 1449  | 3.6 |     | yes | yes |     | PB301153.00.0 | PC000868.01.0 | NA      | hypothetical protein                      |
| PF10_0257                           | 235  | 834   | 3.5 | yes |     | yes |     | PB107107.00.0 | PC103405.00.0 | PY03819 | hypothetical protein                      |
| PF14_0535                           | 1039 | 3579  | 3.4 |     |     | yes | yes | PB000325.00.0 | PC000732.03.0 | PY00670 | hypothetical protein                      |
| PFE1490c                            | 286  | 985   | 3.4 |     |     | yes |     | PB000665.01.0 | PC000284.01.0 | PY05158 | RING zinc finger protein, putative        |
| PFD0225w                            | 558  | 1887  | 3.4 |     | yes | yes |     | PB001071.02.0 | PC000163.01.0 | PY01338 | hypothetical protein                      |
| PF08_0091                           | 149  | 503   | 3.4 |     | yes | yes |     | PB000198.02.0 | PC001346.02.0 | PY04682 | hypothetical protein                      |
| PF11_0326                           | 1300 | 4333  | 3.3 |     |     | yes | yes | NA            | NA            | NA      | hypothetical protein                      |
| PFL0840c                            | 186  | 615   | 3.3 |     |     | yes |     | PB001141.01.0 | PC000137.02.0 | PY05369 | hypothetical protein                      |
| PF14_0732                           | 402  | 1329  | 3.3 |     |     | yes |     | NA            | NA            | NA      | PHIST domain protein                      |
| PFA0440w                            | 158  | 515   | 3.3 |     |     | yes |     | PB000636.02.0 | PC000179.05.0 | PY05079 | hypothetical protein                      |
| PFI1520w                            | 205  | 664   | 3.2 |     |     | yes |     | NA            | NA            | NA      | asparagine-rich antigen, putative         |
| PF14_0647                           | 800  | 2535  | 3.2 |     |     | yes |     | PB000826.01.0 | PC000078.05.0 | PY03684 | hypothetical protein                      |
| PF10_0222                           | 139  | 435   | 3.1 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PF10_0112                           | 1971 | 6117  | 3.1 |     |     | yes |     | NA            | PC000162.05.0 | PY06766 | hypothetical protein                      |
| PF11_0470                           | 263  | 797   | 3.0 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PF10_0216                           | 282  | 852   | 3.0 |     | yes | yes |     | PB301571.00.0 | PC301873.00.0 | PY07622 | hypothetical protein                      |
| PFD0115c                            | 279  | 840   | 3.0 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PFD1030c                            | 184  | 555   | 3.0 |     |     | yes |     | PB000870.03.0 | PC000027.04.0 | PY02465 | hypothetical protein                      |
| PF14_0689                           | 175  | 519   | 3.0 |     |     | yes |     | PB101672.00.0 | NA            | NA      | hypothetical protein                      |
| MAL8P1.25                           | 659  | 1950  | 3.0 |     |     | yes |     | NA            | NA            | PY01888 | hypothetical protein                      |
| PF14_0019                           | 190  | 562   | 3.0 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                      |
| PF14_0303                           | 1210 | 3517  | 2.9 |     |     | yes |     | PB000965.03.0 | PC001381.02.0 | PY04056 | hypothetical protein                      |
| PFB0760w                            | 360  | 1043  | 2.9 |     | yes | yes |     | PB001130.02.0 | PC000456.01.0 | PY01249 | MtN3-like protein, putative               |
| PF14_0536                           | 1357 | 3925  | 2.9 |     |     | yes |     | PB000326.00.0 | PC000000.04.0 | PY02772 | hypothetical protein                      |

|             |       |        |     |     |     |     |     |               |               |         |                                                                                                                                     |
|-------------|-------|--------|-----|-----|-----|-----|-----|---------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------------|
| PFE1445c    | 218   | 629    | 2.9 |     |     | yes |     | PB000995.02.0 | PC302422.00.0 | PY00695 | hypothetical protein                                                                                                                |
| PF14_0209   | 184   | 523    | 2.8 |     |     | yes |     | PB000100.00.0 | PC000184.01.0 | PY07260 | hypothetical protein                                                                                                                |
| MAL8P1.80   | 797   | 2262   | 2.8 |     |     | yes |     | PB000333.03.0 | PC301050.00.0 | PY00568 | hypothetical protein                                                                                                                |
| PFi0395w    | 256   | 723    | 2.8 |     |     | yes | yes | PB001651.02.0 | PC000042.03.0 | PY06648 | hypothetical protein                                                                                                                |
| PFC0220w    | 306   | 851    | 2.8 |     |     | yes |     | PB000855.02.0 | PC000258.01.0 | PY03898 | hypothetical protein                                                                                                                |
| PF10_0055   | 540   | 1502   | 2.8 |     |     | yes |     | PB000604.03.0 | PC000072.03.0 | PY02980 | hypothetical protein                                                                                                                |
| PF10_0279   | 209   | 582    | 2.8 |     |     | yes |     | PB000592.01.0 | PC000235.03.0 | PY05511 | hypothetical protein                                                                                                                |
| PFL1325c    | 301   | 832    | 2.8 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein                                                                                                                |
| PF08_0004   | 176   | 484    | 2.8 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                                                                                                                |
| PF14_0372   | 454   | 1248   | 2.7 |     |     | yes | yes | PB000076.03.0 | PC302506.00.0 | PY00410 | hypothetical protein /protein recongnized by volunteers immunized by irradiated <i>P.falciparum</i> sporozoite (Doolan et al 2003)  |
| PF10_0158   | 594   | 1631   | 2.7 |     |     | yes | yes | PB000119.01.0 | PC000920.01.0 | PY01539 | hypothetical protein                                                                                                                |
| PF13_0137   | 929   | 2528   | 2.7 |     |     | yes | yes | PB000665.00.0 | PC001093.02.0 | PY06638 | hypothetical protein                                                                                                                |
| PF14_0033   | 323   | 874    | 2.7 |     |     | yes |     | PB104419.00.0 | NA            | PY06671 | hypothetical protein                                                                                                                |
| PFB0195c    | 375   | 1010   | 2.7 |     |     | yes |     | PB300181.00.0 | PC001340.02.0 | PY00896 | hypothetical protein                                                                                                                |
| PFC0410w    | 265   | 715    | 2.7 |     |     | yes |     | PB001648.02.0 | PC000186.00.0 | PY07308 | YT521-B-like family protein, putative[conserved apicomplexan protein                                                                |
| PFi0800c    | 312   | 840    | 2.7 |     |     | yes |     | PB000376.00.0 | PC000393.03.0 | NA      | hypothetical protein                                                                                                                |
| PF07_0101   | 285   | 764    | 2.7 |     |     | yes |     | PB000085.00.0 | PC000433.03.0 | PY00052 | hypothetical protein                                                                                                                |
| PF10_0223   | 354   | 946    | 2.7 | yes |     | yes |     | PB001058.02.0 | PC300735.00.0 | PY01666 | hypothetical protein                                                                                                                |
| PFA0215w    | 1875  | 4973   | 2.7 |     |     | yes |     | PB000087.00.0 | PC000812.00.0 | NA      | hypothetical protein                                                                                                                |
| PF11_0067   | 266   | 700    | 2.6 |     |     | yes |     | PB000362.00.0 | PC000864.03.0 | PY03777 | hypothetical protein                                                                                                                |
| PF14_0220   | 391   | 1022   | 2.6 |     |     | yes |     | PB000460.02.0 | PC300194.00.0 | PY00020 | hypothetical protein                                                                                                                |
| PF14_0550   | 6467  | 16639  | 2.6 |     |     | yes | yes | PB000933.01.0 | PC301877.00.0 | PY00674 | hypothetical protein                                                                                                                |
| PFL0045c    | 509   | 1309   | 2.6 |     |     | yes |     | NA            | NA            | NA      | PHIST domain protein                                                                                                                |
| PFL1755w    | 453   | 1159   | 2.6 |     |     | yes |     | PB001038.03.0 | PC000680.04.0 | NA      | hypothetical protein                                                                                                                |
| PF07_0116   | 164   | 419    | 2.6 |     |     | yes | yes | PB000111.00.0 | PC000812.04.0 | PY00092 | hypothetical protein                                                                                                                |
| PFF0380w    | 186   | 474    | 2.5 |     |     | yes |     | PB001068.03.0 | PC001208.02.0 | PY04854 | hypothetical protein                                                                                                                |
| PF10_0295   | 334   | 850    | 2.5 |     | yes | yes |     | PB001030.02.0 | PC000129.02.0 | PY04569 | hypothetical protein                                                                                                                |
| PF14_0074   | 1064  | 2694   | 2.5 |     |     | yes | yes | PB000372.00.0 | PC000331.02.0 | PY04135 | hypothetical protein/ protein recongnized by volunteers immunized by irradiated <i>P.falciparum</i> sporozoite (Doolan et al 2003)  |
| MAL13P1.26  | 123   | 311    | 2.5 |     |     | yes |     | PB000115.03.0 | PC300225.00.0 | PY02189 | hypothetical protein                                                                                                                |
| PFD0915w    | 325   | 820    | 2.5 |     |     | yes |     | PB000175.03.0 | PC000078.02.0 | PY05601 | hypothetical protein                                                                                                                |
| PFB0425c    | 1026  | 2574   | 2.5 |     |     | yes | yes | PB000582.00.0 | PC000469.03.0 | PY00323 | S17 (Kaiser et al 2004)                                                                                                             |
| MAL13P1.295 | 234   | 583    | 2.5 |     |     | yes | yes | NA            | NA            | NA      | hypothetical protein                                                                                                                |
| PFD0375w    | 464   | 1155   | 2.5 |     |     | yes |     | NA            | NA            | PY03396 | hypothetical protein                                                                                                                |
| PFF0765c    | 899   | 2213   | 2.5 |     |     | yes |     | PB000400.02.0 | PC000954.01.0 | PY07542 | hypothetical protein                                                                                                                |
| PFE0330w    | 248   | 609    | 2.5 |     |     | yes |     | PB000034.00.0 | PC000540.04.0 | PY06258 | hypothetical protein                                                                                                                |
| PFD0595w    | 227   | 553    | 2.4 |     |     | yes |     | PB000153.01.0 | PC000047.02.0 | PY05323 | hypothetical protein                                                                                                                |
| PF08_0080   | 251   | 605    | 2.4 |     |     | yes |     | PB000001.00.0 | PC001083.02.0 | PY00460 | hypothetical protein                                                                                                                |
| PFB0923c    | 260   | 627    | 2.4 |     | yes | yes |     | NA            | NA            | NA      | hypothetical protein                                                                                                                |
| PFC0760c    | 400   | 953    | 2.4 |     |     | yes | yes | PB301415.00.0 | PC000574.04.0 | PY05757 | hypothetical protein                                                                                                                |
| PFE0335w    | 259   | 613    | 2.4 |     |     | yes |     | PB000033.00.0 | PC000320.01.0 | PY04352 | hypothetical protein                                                                                                                |
| MAL8P1.11   | 888   | 2085   | 2.3 |     |     | yes |     | PB001018.03.0 | PC000150.01.0 | PY06243 | hypothetical protein                                                                                                                |
| PF08_0061   | 291   | 683    | 2.3 |     |     | yes |     | NA            | PC000240.00.0 | NA      | hypothetical protein                                                                                                                |
| PFC0095c    | 368   | 855    | 2.3 |     |     | yes |     | PB000276.02.0 | NA            | NA      | hypothetical protein                                                                                                                |
| PF13_0182   | 378   | 879    | 2.3 |     | yes | yes | yes | PB000355.02.0 | PC000262.00.0 | PY06413 | hypothetical protein                                                                                                                |
| PF10_0054   | 516   | 1193   | 2.3 |     |     | yes | yes | PB001161.01.0 | PC300034.00.0 | PY02979 | hypothetical protein                                                                                                                |
| MAL13P1.308 | 265   | 602    | 2.3 |     |     | yes | yes | PB108442.00.0 | PC104862.00.0 | PY01759 | hypothetical protein                                                                                                                |
| PF14_0371   | 341   | 777    | 2.3 |     |     | yes |     | PB000862.01.0 | PC000248.00.0 | NA      | hypothetical protein                                                                                                                |
| PFE1550w    | 174   | 395    | 2.3 |     |     | yes |     | NA            | NA            | PY07379 | intergenic sequence                                                                                                                 |
| PF14_0583   | 264   | 599    | 2.3 |     |     | yes |     | PB000810.00.0 | NA            | PY05162 | hypothetical protein                                                                                                                |
| PF10_0106   | 302   | 684    | 2.3 |     |     | yes | yes | NA            | PC000095.00.0 | PY02088 | hypothetical protein                                                                                                                |
| PFL0920c    | 323   | 729    | 2.3 |     |     | yes |     | PB000937.02.0 | PC300167.00.0 | PY01802 | hypothetical protein                                                                                                                |
| PFL1045w    | 225   | 505    | 2.2 |     |     | yes |     | PB000729.01.0 | PC001213.02.0 | PY03214 | hypothetical protein                                                                                                                |
| PF11_0435   | 325   | 722    | 2.2 |     |     | yes | yes | PB001075.03.0 | PC301003.00.0 | PY05500 | hypothetical protein / protein recongnized by volunteers immunized by irradiated <i>P.falciparum</i> sporozoite (Doolan et al 2003) |
| PFB0285c    | 263   | 582    | 2.2 |     |     | yes | yes | NA            | PC000892.02.0 | PY00070 | hypothetical protein                                                                                                                |
| PFA0205w    | 211   | 466    | 2.2 |     |     | yes | yes | PB301531.00.0 | PC000730.03.0 | PY06306 | S24 (Kaiser et al 2004)                                                                                                             |
| PF11_0439   | 1804  | 3971   | 2.2 |     |     | yes | yes | PB001052.02.0 | PC000038.03.0 | PY04078 | hypothetical protein                                                                                                                |
| PFL0130c    | 287   | 628    | 2.2 |     |     | yes |     | PB000981.01.0 | PC000349.03.0 | PY01520 | hypothetical protein conserved                                                                                                      |
| PF10_0213   | 4917  | 10715  | 2.2 |     |     | yes | yes | PB000951.00.0 | PC000275.04.0 | PY01999 | 10b antigen putative                                                                                                                |
| MAL7P1.102  | 190   | 410    | 2.2 |     | yes | yes | yes | NA            | PC301254.00.0 | PY02458 | hypothetical protein                                                                                                                |
| PF11_0291   | 2452  | 5280   | 2.2 |     |     | yes |     | PB000356.02.0 | PC000333.03.0 | PY02741 | hypothetical protein                                                                                                                |
| PF14_0204   | 228   | 489    | 2.1 |     |     | yes |     | PB000263.03.0 | PC000465.02.0 | NA      | hypothetical protein                                                                                                                |
| PFB0660w    | 181   | 389    | 2.1 |     |     | yes |     | PB000192.00.0 | NA            | PY03305 | hypothetical protein                                                                                                                |
| PF11_0474   | 177   | 379    | 2.1 |     |     | yes |     | NA            | NA            | NA      | hypothetical protein conserved                                                                                                      |
| PF14_0379   | 207   | 438    | 2.1 |     |     | yes |     | PB001164.00.0 | PC000376.03.0 | PY04304 | hypothetical protein                                                                                                                |
| PF14_0052   | 507   | 1063   | 2.1 |     |     | yes |     | PB000707.01.0 | PC001420.02.0 | PY03672 | hypothetical protein conserved                                                                                                      |
| PFL1685w    | 268   | 561    | 2.1 |     |     | yes |     | PB001294.00.0 | PC000017.02.0 | PY00507 | hypothetical protein conserved                                                                                                      |
| PFL0790w    | 208   | 435    | 2.1 |     | yes | yes |     | PB000129.00.0 | PC301370.00.0 | PY00178 | hypothetical protein                                                                                                                |
| PF11_0493   | 52425 | 109587 | 2.1 | yes | yes | yes |     | NA            | NA            | NA      | hypothetical protein                                                                                                                |
| PF10_0364   | 234   | 490    | 2.1 |     |     | yes |     | PB108401.00.0 | PC300084.00.0 | NA      | hypothetical protein                                                                                                                |

|             |      |       |     |  |     |     |     |               |               |         |                           |
|-------------|------|-------|-----|--|-----|-----|-----|---------------|---------------|---------|---------------------------|
| PFF0645c    | 270  | 564   | 2.1 |  |     | yes |     | PB000363.02.0 | PC000005.04.0 | PY01670 | integral membrane protein |
| PF14_0402   | 164  | 341   | 2.1 |  |     | yes | yes | PB000562.00.0 | NA            | NA      | hypothetical protein      |
| PF14_0045   | 150  | 313   | 2.1 |  | yes | yes | yes | NA            | NA            | NA      | hypothetical protein      |
| PFD1135c    | 332  | 689   | 2.1 |  |     | yes |     | NA            | NA            | NA      | hypothetical protein      |
| PFD1105w    | 3513 | 7278  | 2.1 |  | yes | yes |     | NA            | PC401501.00.0 | NA      | hypothetical protein      |
| PF14_0362   | 700  | 1438  | 2.1 |  |     | yes |     | NA            | NA            | NA      | hypothetical protein      |
| MAL13P1.316 | 173  | 356   | 2.1 |  |     | yes |     | PB300652.00.0 | PC300180.00.0 | PY04589 | hypothetical protein      |
| PFF0795w    | 902  | 1840  | 2.0 |  | yes | yes |     | PB001518.02.0 | PC000214.04.0 | NA      | hypothetical protein      |
| PFL0220c    | 1355 | 2754  | 2.0 |  | yes | yes |     | PB000699.03.0 | PC102801.00.0 | NA      | hypothetical protein      |
| PF14_0018   | 297  | 603   | 2.0 |  |     | yes |     | NA            | NA            | NA      | PHIST domain protein      |
| PFI1220w    | 6743 | 13558 | 2.0 |  |     | yes |     | NA            | NA            | NA      | hypothetical protein      |
| PFE1120w    | 393  | 790   | 2.0 |  |     | yes | yes | PB000920.00.0 | PC000530.04.0 | PY00040 | hypothetical protein      |
| PF14_0740   | 244  | 490   | 2.0 |  |     | yes | yes | NA            | NA            | NA      | hypothetical protein      |

GENES DOWN-REGULATED IN SPOROZOITES INCUBATED AT 37°C WITH HEPATOCYTES

| gene.ID                      | salivary Gland sporozoite mean intensity | sporozoite incubated 1 hr at 37C° with hepatocytes mean intensity | Microarray ratio sporozoite 1 hr at 37C° with hepatocytes / salivary gland sporozoite | Found in Axenic liver stage (Wang et al 2004) | predicted signal peptide/anchor (SignalP) | Containing at least 1 predicted transmembrane domains (TMAP, TMPRED, TOPPED2 and | detected in sporozoite using mass spectrometry (Florens et al 2002) | Presence of orthologue in <i>P. berghei</i> (tarun et al 2008) | Presence of orthologue in <i>P. chabaudi</i> (tarun et al 2008) | Presence of orthologue in <i>P. yoelii</i> (tarun et al 2008) | description                                                                           |
|------------------------------|------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------|
| metabolic processes          |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PF10_0275                    | 416                                      | 143                                                               | 0.34                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000126.02.0                                                  | PC000339.04.0                                                   | PY02951                                                       | protoporphyrinogen oxidase putative                                                   |
| PF11_0395                    | 1882                                     | 662                                                               | 0.35                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | PB001219.00.0                                                  | PC301754.00.0                                                   | PY04459                                                       | guanylyl cyclase                                                                      |
| PF14_0246                    | 944                                      | 386                                                               | 0.41                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | PB000844.03.0                                                  | PC000344.02.0                                                   | PY00206                                                       | phosphoenolpyruvate carboxylase putative                                              |
| PF13_0187                    | 912                                      | 394                                                               | 0.43                                                                                  | yes                                           |                                           | yes                                                                              |                                                                     | PB000886.01.0                                                  | PC000401.03.0                                                   | PY01409                                                       | DNA helicase, putative conserved Plasmodium protein, unknown function                 |
| PFD0085c                     | 731                                      | 351                                                               | 0.48                                                                                  | yes                                           | yes                                       | yes                                                                              | yes                                                                 | NA                                                             | NA                                                              | NA                                                            | long chain acyl-CoA synthase, ATP dependent, family 1, isoform 6                      |
| PFC0126c                     | 990                                      | 469                                                               | 0.47                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000592.00.0                                                  | PC300700.00.0                                                   | PY03962                                                       | PFMNL-1 mitoNEET-like iron-sulfur protein, putative                                   |
| nucleic metabolism           |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PFC0850c                     | 685                                      | 241                                                               | 0.35                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000924.01.0                                                  | PC000118.04.0                                                   | PY00970                                                       | endonuclease/exonuclease/phosphatase family protein, putative                         |
| PF10_0217                    | 381                                      | 161                                                               | 0.42                                                                                  |                                               |                                           |                                                                                  |                                                                     | PB000229.02.0                                                  | PC000212.01.0                                                   | PY01659                                                       | pre-mRNA splicing factor putative                                                     |
| PFE0630c                     | 747                                      | 329                                                               | 0.44                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000705.03.0                                                  | PC000646.04.0                                                   | PY04605                                                       | orotate phosphoribosyltransferase putative                                            |
| PFF1400w                     | 805                                      | 372                                                               | 0.46                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | PB000608.00.0                                                  | PC000105.04.0                                                   | PY04171                                                       | RAP protein, putative                                                                 |
| MAL7P1.10                    | 306                                      | 152                                                               | 0.50                                                                                  |                                               | yes                                       | yes                                                                              |                                                                     | NA                                                             | NA                                                              | NA                                                            | centrin                                                                               |
| protein metabolism           |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PFE0830c                     | 1007                                     | 234                                                               | 0.23                                                                                  |                                               | yes                                       | yes                                                                              |                                                                     | PB000202.02.0                                                  | PC000384.03.0                                                   | PY03311                                                       | GTP-binding translation elongation factor tu family protein                           |
| PF14_0327                    | 818                                      | 228                                                               | 0.28                                                                                  |                                               |                                           |                                                                                  | yes                                                                 | PB000590.02.0                                                  | PC302079.00.0                                                   | PY02559                                                       | methionine aminopeptidase type II putative                                            |
| PF13_0069                    | 313                                      | 97                                                                | 0.31                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | PB001061.02.0                                                  | PC000085.01.0                                                   | PY02337                                                       | translation initiation factor if-2 putative                                           |
| MAL8P1.86                    | 651                                      | 205                                                               | 0.32                                                                                  |                                               | yes                                       | yes                                                                              |                                                                     | NA                                                             | PC000582.01.0                                                   | NA                                                            | Sel3 protein conserved Plasmodium selenoprotein, unknown function                     |
| PF13_0228                    | 1350                                     | 553                                                               | 0.41                                                                                  | yes                                           |                                           |                                                                                  |                                                                     | PB000942.03.0                                                  | PC000692.04.0                                                   | PY06397                                                       | 40S ribosomal subunit protein S6 putative                                             |
| PFL1425w                     | 1214                                     | 518                                                               | 0.43                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | PB000346.03.0                                                  | PC000787.00.0                                                   | PY07337                                                       | t-complex protein 1 gamma subunit putative                                            |
| PFD0990w                     | 3342                                     | 1455                                                              | 0.44                                                                                  |                                               |                                           |                                                                                  | yes                                                                 | NA                                                             | PC000317.01.0                                                   | PY06329                                                       | ribosome recycling factor, putative                                                   |
| PFI1575c                     | 604                                      | 272                                                               | 0.45                                                                                  |                                               |                                           |                                                                                  |                                                                     | PB300259.00.0                                                  | PC301190.00.0                                                   | PY03620                                                       | peptide release factor putative                                                       |
| PFB0550w                     | 447                                      | 212                                                               | 0.48                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000780.02.0                                                  | PC000129.05.0                                                   | PY03558                                                       | peptide chain release factor subunit 1 putative                                       |
| PF13_0126                    | 648                                      | 310                                                               | 0.48                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000539.02.0                                                  | PC000359.04.0                                                   | PY01060                                                       | translation initiation factor EIF-2B subunit related                                  |
| ubiquitin signalling pathway |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PF08_0020                    | 2279                                     | 1133                                                              | 0.50                                                                                  |                                               |                                           |                                                                                  |                                                                     | PB000364.01.0                                                  | PC000138.02.0                                                   | PY00518                                                       | Ubiquitination-mediated degradation component, putative                               |
| protease                     |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PFB0335c                     | 419                                      | 171                                                               | 0.41                                                                                  |                                               |                                           | yes                                                                              |                                                                     | NA                                                             | NA                                                              | NA                                                            | cysteine protease, putative serine repeat antigen 6 (SERA-6)                          |
| signalling                   |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PFA0335w                     | 524                                      | 195                                                               | 0.37                                                                                  |                                               |                                           |                                                                                  |                                                                     | PB000519.01.0                                                  | NA                                                              | PY01029                                                       | <i>P. falciparum</i> GTP binding protein RAB5                                         |
| PFE1010w                     | 1263                                     | 522                                                               | 0.41                                                                                  |                                               | yes                                       |                                                                                  |                                                                     | PB000146.00.0                                                  | PC301296.00.0                                                   | PY02192                                                       | protein phosphatase 2c putative                                                       |
| transportation               |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PFL2065c                     | 362                                      | 138                                                               | 0.38                                                                                  |                                               |                                           |                                                                                  |                                                                     | PB000813.00.0                                                  | PC000913.01.0                                                   | PY04101                                                       | mitochondrial import inner membrane translocase subunit putative                      |
| PFE0445c                     | 712                                      | 297                                                               | 0.42                                                                                  |                                               |                                           | yes                                                                              |                                                                     | PB000031.03.0                                                  | PC000152.05.0                                                   | PY04299                                                       | SNAP protein (soluble N-ethylmaleimide-sensitive factor Attachment Protein), putative |
| blood stage surface proteins |                                          |                                                                   |                                                                                       |                                               |                                           |                                                                                  |                                                                     |                                                                |                                                                 |                                                               |                                                                                       |
| PF10_0345                    | 1172                                     | 402                                                               | 0.34                                                                                  |                                               | yes                                       |                                                                                  |                                                                     | NA                                                             | NA                                                              | NA                                                            | merozoite surface protein-3                                                           |
| PFL2625w                     | 344                                      | 123                                                               | 0.36                                                                                  |                                               | yes                                       | yes                                                                              |                                                                     | NA                                                             | NA                                                              | NA                                                            | rifin                                                                                 |
| PFA0740w                     | 707                                      | 254                                                               | 0.36                                                                                  |                                               |                                           | yes                                                                              | yes                                                                 | NA                                                             | NA                                                              | NA                                                            | rifin                                                                                 |
| PF10_0177                    | 2215                                     | 838                                                               | 0.38                                                                                  |                                               | yes                                       | yes                                                                              |                                                                     | PB001168.00.0                                                  | PC000273.03.0                                                   | PY02573                                                       | erythrocyte membrane-associated antigen                                               |
| PFL1385c                     | 881                                      | 335                                                               | 0.38                                                                                  |                                               | yes                                       |                                                                                  |                                                                     | PB000668.01.0                                                  | PC000196.03.0                                                   | PY02883                                                       | Merozoite Surface Protein 9                                                           |
| PF14_0001                    | 917                                      | 351                                                               | 0.38                                                                                  |                                               |                                           |                                                                                  |                                                                     | NA                                                             | NA                                                              | NA                                                            | erythrocyte membrane protein 1 (PIEMP1) truncated pseudogene                          |
| PFE1640w                     | 704                                      | 306                                                               | 0.43                                                                                  |                                               |                                           |                                                                                  |                                                                     | NA                                                             | NA                                                              | NA                                                            | erythrocyte membrane protein 1 (PIEMP1), truncated, pseudogene                        |
| PF13_0010                    | 891                                      | 397                                                               | 0.45                                                                                  |                                               |                                           | yes                                                                              |                                                                     | NA                                                             | NA                                                              | NA                                                            | glycophorin binding protein family, Gbph                                              |

|                                     |      |      |      |  |     |     |     |               |               |         |                                                         |
|-------------------------------------|------|------|------|--|-----|-----|-----|---------------|---------------|---------|---------------------------------------------------------|
| PFD0125c                            | 326  | 155  | 0,48 |  |     | yes |     | NA            | NA            | NA      | stevor                                                  |
| PFA0010c                            | 386  | 184  | 0,48 |  |     | yes |     | NA            | NA            | NA      | rifin                                                   |
| PFD1240w                            | 882  | 434  | 0,49 |  |     | yes |     | NA            | NA            | NA      | rifin                                                   |
| parasitophorous vacuole proteins    |      |      |      |  |     |     |     |               |               |         |                                                         |
| PF10_0019                           | 1183 | 382  | 0,32 |  | yes | yes |     | NA            | NA            | NA      | early transcribed membrane protein 10.1, etramp 10.1    |
| hypothetical proteins               |      |      |      |  |     |     |     |               |               |         |                                                         |
| PF11715w                            | 1506 | 410  | 0,27 |  |     |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| PF13_0321                           | 377  | 109  | 0,29 |  |     |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| PF14_0669                           | 4167 | 1213 | 0,29 |  |     |     |     | PB000087.02.0 | PC000079.00.0 | PY06654 | hypothetical protein                                    |
| PFF0640w                            | 470  | 140  | 0,30 |  | yes |     |     | NA            | PC302065.00.0 | NA      | hypothetical protein                                    |
| PF11_0421                           | 1511 | 537  | 0,36 |  |     |     |     | PB000080.02.0 | PC000375.00.0 | PY02872 | hypothetical protein                                    |
| PFL0600w                            | 2416 | 901  | 0,37 |  | yes |     |     | PB001041.00.0 | PC001257.02.0 | PY06936 | hypothetical protein                                    |
| PF13_0060                           | 793  | 301  | 0,38 |  |     |     |     | PB001137.00.0 | PC301180.00.0 | PY02801 | hypothetical protein                                    |
| PF10_0184                           | 1082 | 435  | 0,40 |  |     |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| PFC0500w                            | 1026 | 414  | 0,40 |  |     |     |     | PB001146.02.0 | PC000526.00.0 | PY01712 | hypothetical protein                                    |
| PF11_0503                           | 1210 | 491  | 0,41 |  | yes |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| PF11380c                            | 1138 | 488  | 0,43 |  |     |     |     | PB001581.02.0 | PC000122.05.0 | NA      | hypothetical protein                                    |
| MAL13P1.345                         | 328  | 143  | 0,44 |  |     |     |     | NA            | NA            | PY04218 | hypothetical protein                                    |
| MAL8P1.47                           | 602  | 267  | 0,44 |  |     |     |     | PB000536.01.0 | PC301916.00.0 | PY07232 | hypothetical protein                                    |
| MAL13P1.113                         | 394  | 182  | 0,46 |  |     |     |     | NA            | NA            | PY07140 | conserved Plasmodium protein, unknown function          |
| PFL1675c                            | 752  | 351  | 0,47 |  | yes |     | yes | PB001293.00.0 | PC000267.04.0 | PY03515 | CPW-WPC family protein                                  |
| PF10_0021                           | 370  | 174  | 0,47 |  | yes |     |     | NA            | NA            | NA      | PHIST domain protein                                    |
| MAL8P1.134                          | 6532 | 3125 | 0,48 |  |     |     |     | PB101950.00.0 | PC106553.00.0 | PY04695 | ferlin like protein, putative                           |
| PF11_0387                           | 4602 | 2188 | 0,48 |  |     |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| PF13_0169                           | 2452 | 1200 | 0,49 |  |     |     |     | PB001245.00.0 | PC001215.02.0 | PY02177 | hypothetical protein                                    |
| MAL8P1.94                           | 3711 | 1840 | 0,50 |  |     |     |     | NA            | NA            | NA      | hypothetical protein                                    |
| hypothetical transmembrane proteins |      |      |      |  |     |     |     |               |               |         |                                                         |
| MAL13P1.93                          | 1589 | 420  | 0,26 |  |     | yes |     | PB001086.02.0 | PC000704.03.0 | PY00187 | hypothetical protein                                    |
| PFL2115c                            | 547  | 151  | 0,28 |  | yes | yes | yes | PB000850.03.0 | PC000842.01.0 | PY01214 | glucose inhibited division protein A homologue putative |
| PF11_0232                           | 613  | 212  | 0,35 |  |     | yes | yes | PB000262.00.0 | PC301868.00.0 | NA      | hypothetical protein                                    |
| MAL8P1.143                          | 1785 | 633  | 0,35 |  |     | yes |     | PB300828.00.0 | PC000265.04.0 | PY04434 | hypothetical protein                                    |
| PF07_0074                           | 3568 | 1286 | 0,36 |  |     | yes |     | PB000710.02.0 | PC300736.00.0 | PY03294 | hypothetical protein                                    |
| PFC0515c                            | 410  | 153  | 0,38 |  |     | yes |     | PB000290.00.0 | PC001307.02.0 | PY01708 | TPR Domain containing protein                           |
| PF11_0146                           | 1247 | 509  | 0,41 |  |     | yes |     | PB000660.00.0 | PC302215.00.0 | PY00732 | hypothetical protein                                    |
| PF11_0484                           | 2094 | 878  | 0,42 |  |     | yes |     | PB000802.02.0 | PC300068.00.0 | PY02407 | hypothetical protein                                    |
| PF13_0219                           | 2280 | 978  | 0,43 |  |     | yes | yes | PB000649.03.0 | PC000126.00.0 | PY04556 | hypothetical protein                                    |
| PFF0075c                            | 374  | 163  | 0,44 |  |     | yes |     | NA            | NA            | NA      | hypothetical protein                                    |
| PFL1980c                            | 604  | 267  | 0,44 |  |     | yes |     | PB000554.01.0 | PC300673.00.0 | PY02222 | hypothetical protein                                    |
| PF11780w                            | 477  | 214  | 0,45 |  |     | yes |     | NA            | NA            | NA      | PHIST domain protein                                    |
| PF14_0506                           | 778  | 354  | 0,45 |  |     | yes |     | PB000401.03.0 | PC101841.00.0 | PY00257 | hypothetical protein                                    |
| PF14_0705                           | 485  | 222  | 0,46 |  |     | yes |     | PB000511.00.0 | PC000776.01.0 | PY03693 | hypothetical protein                                    |
| PFD0170c                            | 328  | 152  | 0,46 |  |     | yes |     | PB001000.02.0 | NA            | PY02446 | hypothetical protein                                    |
| PFF0095c                            | 525  | 253  | 0,48 |  |     | yes | yes | PB000291.01.0 | PC000376.00.0 | PY02270 | hypothetical protein                                    |
| PFL1300c                            | 314  | 152  | 0,49 |  | yes | yes |     | PB300607.00.0 | PC000382.05.0 | PY04372 | hypothetical protein                                    |
| PF14_0249                           | 1459 | 710  | 0,49 |  | yes | yes | yes | PB000236.03.0 | PC301442.00.0 | PY03329 | hypothetical protein                                    |
| PF10_0185                           | 600  | 293  | 0,49 |  |     | yes |     | NA            | PC001014.02.0 | NA      | hypothetical protein                                    |
| PFB0615c                            | 1335 | 656  | 0,49 |  |     | yes |     | PB001287.00.0 | PC300732.00.0 | PY03936 | hypothetical protein                                    |