ADDITIONAL METHODS

The *P. falciparum* genome was scanned using the following parameters:

- Minimum Peptide Length = 250 amino acids
- Maximum Peptide Length = 5000 amino acids
- Smoothing Window Length = 19 amino acids
- Peak Threshold = 1.4 hydropathy units (Kyte-Doolittle)
- Valley Threshold = 0.2
- Maximum Location for First Peak = within first 1000 amino acids
- Minimum Peak Width = 12 amino acids
- Maximum Peak Width = 60 amino acids
- Allow Merged Peaks = True
- Minimum Number of Transmembrane Domains = 7
- Maximum Number of Transmembrane Domains = 22
Table 4: List of primers used in this study.

| Gene       | Sequence (5' to 3') | Product Size (bp) |
|------------|---------------------|-------------------|
| PFB0435c   | CCACTTTGGGTGCTCACGGAG (F) TGTGAAGCCAATGCGGAAA (R) | 427 |
| PFE0775c   | CCGGACGTGTTGTTAGATGG (F) AAAGAAAGGAGAGACGAGA (R) | 400 |
| PF11_0334  | TGACCCCAATAACCTGTTGTC (F) TCACAGCCTGTTGTTATACCTG (R) | 458 |
| PFB0210c   | GAAGAATGGAAAGAGCGGATT (F) ACACATACGCCACCTTCT (R) | 453 |
| PF10955w   | ATGTCGCAATAGGGGAGGCACA (F) TTCTCATAGGCAACCACCAA (R) | 437 |
| PF10785c   | TGGAGTTTGGTTGTTGGAAT (F) TCATGGTAATCCACCTTCTT (R) | 430 |
| PFE1455w   | TGGTTTGGTTATACGCGGTTT (F) CTGCATGGTAAATCCAGGTT (R) | 410 |
| MAL6P1.133 | CCAAAGAAATAGGGGAGAGA (F) TTGTGAATAAGGACGGGAAA (R) | 398 |
| PFL0420w   | CTGCTGTTTTATCACTGTTTGC (F) TACTCTCATATTGACGCAAC (R) | 377 |
| PFL1515c   | GGATGTTGCTGTTGTTTGGC (F) AATGGAAATAGGGGAGAGA (R) | 497 |
| MALB1P.13  | TGCCGATTTTATCACTGATT (F) TTGGAAATGTTGTTAGGAA (R) | 440 |
| PF10_0215  | AGTGGGCGACATTACACCT (F) GGACAGGAAATAGGGGAGAGA (R) | 499 |
| PFI11_072  | CAATCGTTTTATGCGGACCAT (F) TTTCCGATGCTTCTGCGT (R) | 471 |
| PFB0465c   | GCCGACATTTATGGGCGGAAA (F) TCCCAAAAGAATGCTCCACCA (R) | 490 |
| PFI11295c  | GGGAAACATGCTGATCCAC (F) TTTCTTTGACGGAGAGACA (R) | 396 |
| PFI13_0252 | TGGTTGTTGAGGGAGATAGAC (F) TTTCTGCTAAGGAGACCTGA (R) | 410 |
| MALB1P.32  | CCGGTTTTTATGCGGACCAT (F) TTTGGAAATGTTGTTAGGAA (R) | 423 |
| PFA0160c   | GAAGGAGGAGGAGATCCAC (F) TTTCTGCTAAGGAGACCTGA (R) | 471 |
| PFI14_0082 | TGATTTGATCGATGCGTATT (F) TTTCCATCTCATATTGCGGAAA (R) | 422 |
| PFL1315w   | AAAAGGAAGGAGGAGTGGAT (F) TACACATCGTTTGGATTACCT (R) | 381 |
| PFI14_0622 | TCCGAATTGTTGTTGTTGTT (F) TTCTCTTGTCTAGTCTTAC (R) | 400 |
| PFI14_0342 | ATATCTTGCACCCGCGGTTT (F) TGATCTTTTCTCCTGCTGTCG (R) | 350 |
| PFA0245w   | TATACAGGAGCTCCGGCTGT (F) GGTGAGCTCCTGATACGGG (R) | 419 |
| PFC0530w   | TGATTTGAGGAGGACATGTTA (F) CTTTGAGCTATTTGCTTG (R) | 402 |
| PFI0720w   | TTTGGAATTCTTTCCTGCTG (F) TTTTCTGATCGACCCATAG (R) | 450 |
| PFI11_0310 | TCAACTTTGGCTGTTGAGG (F) GTATGCTGTTGTTGTTACTG (R) | 320 |
| PFI14_0679 | ACGTGGTGTGTTGTTGCTG (F) CACATTTGCACTCTCCCATTA (R) | 397 |
| MAL13P1.206 | GCCGCAAGTATGGGAAGGTAA (F) GAGCCGAGCAGACCTCAG (R) | 406 |
| PFB0275w   | AGCCGAGGATTTTGTGTTG (F) AGGCCAGCGGTTTGTGCTAC (R) | 374 |
| PFI11_0059 | TGCTATACAGGACCTGAC (F) AAAGAAGCTCTGAGTCCTCC (R) | 447 |
| PFI14_0260 | CAGTTAGGATTTGTTGTTG (F) ACCACCCGAAACCAAGTAAAC (R) | 480 |
| PFI14_0387 | GCCGAAAGAACTTACCCAT (F) TAAACAAAGTCTGGTTGAG (R) | 401 |
| β-Actin1   | GTTGGTACAGCAGCAAGCAGG (F) GCCATGGTACAGCAGCAAGCAGG (R) | 425 |

*a* Forward primer (F) and reverse primer (R).