

Heterogeneous genetic diversity pattern in *Plasmodium vivax* genes encoding merozoite surface proteins (-7E, -7F and -7L)

Additional file 11 Inter-species positively and negatively selected sites detected for *pvmsp-7* genes.

Positively selected sites			
Gene	5' end	central	3' end
<i>mmsp-7E</i>	-	132, 133, 135, 136, 147, 151, 154, 161, 162, 164, 165, 169, 171, 172, 176, 178, 195, 200, 203, 211, 217, 239	319, 323, 371
<i>mmsp-7F</i>	6	212, 295	424
<i>mmsp-7L</i>	11, 49	159, 246, 247, 260	357
Negatively selected sites			
Gene	5' end	central	3' end
<i>mmsp-7E</i>	28, 39, 46, 48, 49, 52, 53, 56, 63, 64, 69, 72, 84, 88, 93, 96, 100, 104, 109, 110, 115, 118, 119, 127	156, 236, 245	252, 262, 263, 264, 272, 282, 283, 294, 300, 302, 303, 309, 311, 321, 327, 337, 338, 343, 349, 352, 356, 357, 358, 360, 361, 365, 366, 368, 377, 379
<i>mmsp-7F</i>	2, 7, 34, 38, 46, 104, 109	149, 168, 183, 195, 204, 207, 289, 298, 300, 325	384, 401, 406, 421, 449, 463, 471
<i>mmsp-7L</i>	25, 42, 48, 59, 72, 74, 79, 83, 117, 118	138, 175, 180, 186, 191, 195, 210, 211, 215, 236, 242, 244, 245	273, 274, 279, 280, 282, 305, 314, 330, 345, 381, 384, 406, 410

5'-end (*pvmsp-7E*: nucleotide 1–390, *pvmsp-7F*: nucleotide 1–432, *pvmsp-7L*: nucleotide 1–381), central (*pvmsp-7E*: nucleotide 391–747, *pvmsp-7F*: nucleotide 433–1,053, *pvmsp-7L*: nucleotide 382–816) and 3'-end (*pvmsp-7E*: nucleotide 748–1,158, *pvmsp-7F*: nucleotide 1,054–1,449, *pvmsp-7L*: nucleotide 817–1,275). Numbers based on Additional files 4, 9 and 10.