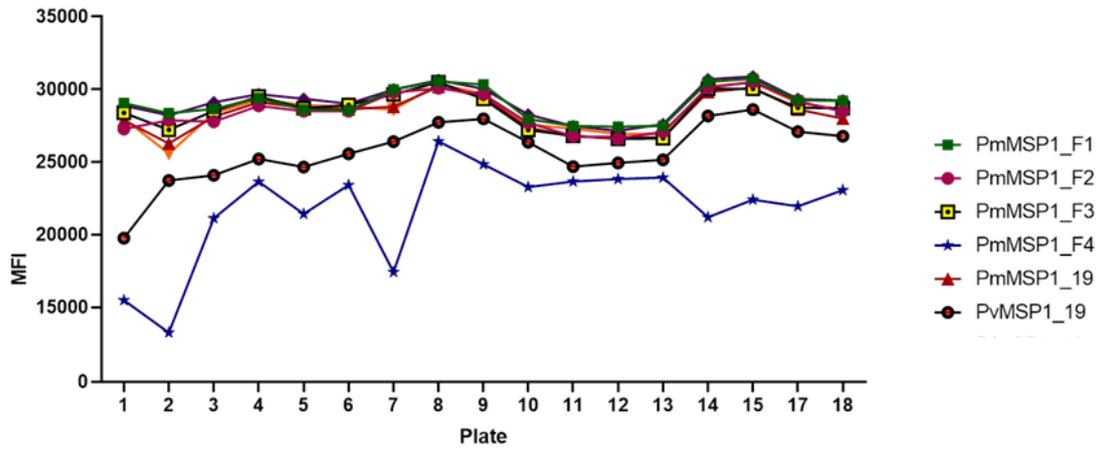


## Supplementary Information



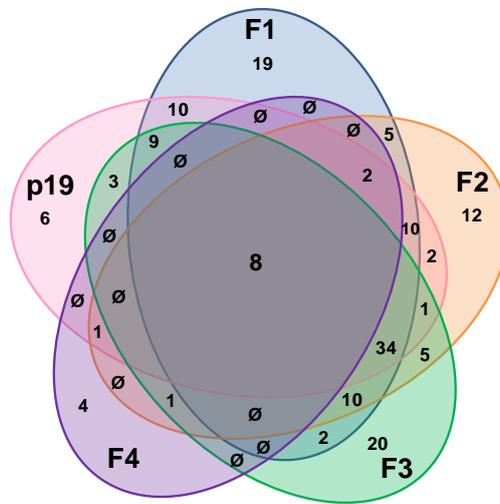
**Figure S1.** Coupling efficiency of recombinant proteins to magnetic beads. Coupling efficiency of recombinant proteins to magnetic beads was assessed by using biotinylated rabbit anti-GST polyclonal IgG antibody (Abcam, Cambridge, MA, USA), followed by incubation with R-phycoerythrin-labelled streptavidin and fluorescence measurement with the BioPlex 200 instrument (Bio-Rad, Hercules, CA, USA), as described in Materials and Methods.

**Table S1.** Absolute and relative frequencies of positive free-living non-human primates by Bioplex assay per MSP1 protein.

Family	Species	Proteins													
		PmMSP1 <sub>F1</sub>		PmMSP1 <sub>F2</sub>		PmMSP1 <sub>F3</sub>		PmMSP1 <sub>F4</sub>		PmMSP1 <sub>19</sub>		PvMSP1 <sub>19</sub>		PfMSP1 <sub>19</sub>	
Aotidae	<i>Aotus azarae</i>	-	(0/10)	-	(0/10)	10.0	(1/10)	-	(0/10)	10.0	(1/10)	-	(0/10)	-	(0/10)
	<i>Aotus</i> sp.	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)
Atelidae	<i>Alouatta belzebul</i>	100.0	(1/1)	-	(0/1)	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Alouatta caraya</i>	1.2	(1/86)	2.3	(2/86)	1.2	(1/86)	-	(0/86)	1.2	(1/86)	1.2	(1/86)	1.2	(1/86)
	<i>Alouatta guariba</i>	29.8	(17/57)	36.8	(21/57)	28.1	(16/57)	3.5	(2/57)	33.3	(19/57)	73.7	(42/57)	1.8	(1/57)
	<i>Alouatta puruensis</i>	35.7	(5/14)	42.9	(6/14)	28.6	(4/14)	-	(0/14)	28.6	(4/14)	7.1	(1/14)	-	(0/14)
	<i>Alouatta</i> sp.	22.6	(12/53)	11.3	(6/53)	22.6	(12/53)	1.9	(1/53)	22.6	(12/53)	47.2	(25/53)	-	(0/53)
	<i>Ateles chamek</i>	73.3	(11/15)	53.3	(8/15)	46.7	(7/15)	6.7	(1/15)	53.3	(8/15)	6.7	(1/15)	-	(0/15)
	<i>Lagothrix cana</i>	69.2	(9/13)	69.2	(9/13)	69.2	(9/13)	15.4	(2/13)	69.2	(9/13)	7.7	(1/13)	7.7	(1/13)
Callitrichidae	<i>Callithrix penicillata</i>	-	(0/21)	4.8	(1/21)	38.1	(8/21)	-	(0/21)	-	(0/21)	-	(0/21)	-	(0/21)
	<i>Cebuella pygmaea niveiventris</i>	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Leontocebus labiatus</i>	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Leontocebus weddelli</i>	-	(0/5)	-	(0/5)	-	(0/5)	-	(0/5)	-	(0/5)	-	(0/5)	-	(0/5)
	<i>Mico melanurus</i>	50.0	(1/2)	50.0	(1/2)	50.0	(1/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
Cebidae	<i>Cebus albifrons</i>	100.0	(1/1)	100.0	(1/1)	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Cebus</i> sp.	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Saimiri boliviensis</i>	50.0	(1/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
	<i>Saimiri</i> sp.	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
	<i>Saimiri ustus</i>	41.7	(5/12)	41.7	(5/12)	41.7	(5/12)	16.7	(2/12)	25.0	(3/12)	8.3	(1/12)	8.3	(1/12)
	<i>Sapajus apella</i>	57.9	(11/19)	36.8	(7/19)	26.3	(5/19)	21.1	(4/19)	36.8	(7/19)	10.5	(2/19)	5.3	(1/19)
	<i>Sapajus cay</i>	-	(0/1)	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
<i>Sapajus macrocephalus</i>	33.3	(1/3)	33.3	(1/3)	33.3	(1/3)	33.3	(1/3)	33.3	(1/3)	-	(0/3)	-	(0/3)	
Pitheciidae	<i>Chiropotes albinasus</i>	50.0	(1/2)	50.0	(1/2)	50.0	(1/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
	<i>Pithecia mittermeieri</i>	40.0	(10/25)	16.0	(4/25)	24.0	(6/25)	-	(0/25)	36.0	(9/25)	-	(0/25)	4.0	(1/25)
	<i>Plecturocebus brunneus</i>	21.4	(3/14)	14.3	(2/14)	14.3	(2/14)	-	(0/14)	21.4	(3/14)	-	(0/14)	-	(0/14)
	<i>Plecturocebus dubius</i>	66.7	(2/3)	33.3	(1/3)	33.3	(1/3)	-	(0/3)	-	(0/3)	-	(0/3)	-	(0/3)
	<i>Plecturocebus</i> sp.	33.3	(2/6)	16.7	(1/6)	-	(0/6)	-	(0/6)	16.7	(1/6)	16.7	(1/6)	-	(0/6)

**Table S2.** Absolute and relative frequencies of positive captive non-human primates by Bioplex assay per MSP1 protein.

Family	Species	Proteins													
		PmMSP1 <sub>F1</sub>		PmMSP1 <sub>F2</sub>		PmMSP1 <sub>F3</sub>		PmMSP1 <sub>F4</sub>		PmMSP1 <sub>19</sub>		PvMSP1 <sub>19</sub>		PfMSP1 <sub>19</sub>	
Atelidae	<i>Alouatta caraya</i>	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	25.0	(1/4)	-	(0/4)
	<i>Alouatta guariba</i>	10.8	(4/37)	10.8	(4/37)	8.1	(3/37)	-	(0/37)	2.7	(1/37)	27.0	(10/37)	-	(0/37)
	<i>Alouatta</i> sp.	-	(0/7)	14.3	(1/7)	-	(0/7)	-	(0/7)	-	(0/7)	42.9	(3/7)	-	(0/7)
	<i>Ateles chamek</i>	28.6	(2/7)	14.3	(1/7)	14.3	(1/7)	-	(0/7)	14.3	(1/7)	-	(0/7)	-	(0/7)
	<i>Ateles marginatus</i>	50.0	(1/2)	-	(0/2)	-	(0/2)	-	(0/2)	50.0	(1/2)	-	(0/2)	-	(0/2)
	<i>Ateles paniscus</i>	50.0	(2/4)	25.0	(1/4)	-	(0/4)	25.0	(1/4)	25.0	(1/4)	-	(0/4)	-	(0/4)
	<i>Ateles</i> sp.	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
	<i>Brachyteles arachnoides</i>	25.0	(1/4)	25.0	(1/4)	50.0	(2/4)	-	(0/4)	25.0	(1/4)	50.0	(2/4)	-	(0/4)
	<i>Lagothrix cana</i>	20.0	(1/5)	40.0	(2/5)	40.0	(2/5)	-	(0/5)	40.0	(2/5)	40.0	(2/5)	-	(0/5)
	<i>Lagothrix lagothricha</i>	50.0	(1/2)	50.0	(1/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
<i>Lagothrix poeppigii</i>	100.0	(1/1)	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	
Cebidae	<i>Cebus kaapori</i>	-	(0/3)	-	(0/3)	-	(0/3)	33.3	(1/3)	-	(0/3)	-	(0/3)	-	(0/3)
	<i>Cebus</i> sp.	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)	-	(0/4)
	<i>Sapajus apella</i>	-	(0/22)	-	(0/22)	9.1	(2/22)	4.5	(1/22)	4.5	(1/22)	-	(0/22)	9.1	(2/22)
	<i>Sapajus flavius</i>	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)	-	(0/2)
	<i>Sapajus xanthosternos</i>	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
Cercopithecidae	<i>Papio cynocephalus</i>	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
Hominidae	<i>Pan troglodytes</i>	-	(0/9)	11.1	(1/9)	-	(0/9)	-	(0/9)	-	(0/9)	33.3	(3/9)	-	(0/9)
	<i>Pongo pygmaeus</i>	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	100.0	(1/1)	-	(0/1)
Hylobatidae	<i>Hylobates lar</i>	100.0	(1/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)
Pitheciidae	<i>Callicebus nigrifrons</i>	-	(0/2)	-	(0/2)	50.0	(1/2)	-	(0/2)	-	(0/2)	50.0	(1/2)	-	(0/2)
	<i>Plecturocebus</i> sp.	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)	-	(0/1)



**Figure S2.** Intersection chart of positive samples against *Plasmodium malariae* antigens.