

TABLE
The reactivity index (RI) analysis reveals stronger recognition of a number of parasite lineages by asymptomatic patient plasmas

	3D7 _{ICAM}	3D7 _{ICD36}	S20 _{ICAM}	S20 _{CD36}	99 _{ICAM}	99 _{CD36}	106 _{ICAM}	106 _{CD36}	3D7 _{PFD0020c}	3D7 _{Pf11_0521}	134 _{ICAM}	134 _{CD36}	MSP1 ₁₉	Malaria (n)
S1	■		■				■	■		■		■		3
S2	■		■		■		■		■	■		■	■	2
S3			■			■	■			■		■		5
S4			■		■		■		■	■		■	■	30
S5	■						■		■			■		20
S6			■	■			■	■	■				■	20
S7		■	■				■	■			■	■		1
S8		■	■			■		■	■		■	■		1
S9			■		■		■		■			■		Nd
S10		■	■				■		■		■	■		Nd
S11	■	■	■				■				■	■		Nd
S12							■		■	■		■		Nd
S13										■				Nd
S14			■						■	■				Nd
S15			■		■		■		■	■		■		Nd
S16		■	■			■	■		■	■		■		4
S17		■					■		■	■		■		21
S18			■			■	■		■	■		■		0
S19					■				■	■		■		4
S20					■				■	■		■		3
S21						■				■		■		1
S22									■	■	■	■		8
S23							■		■	■	■	■		3
S24	■		■	■			■		■	■		■		1
S25			■	■			■		■	■		■	■	6
S26	■		■				■		■	■		■		1
S27	■		■				■		■	■		■		4
S28	■						■		■	■		■		1
S29	■		■			■	■		■	■		■		5
S30			■				■		■	■		■		2
S31	■		■		■		■		■	■		■		3
S32			■				■		■	■		■		Nd
S33	■		■		■		■		■	■		■		Nd
S34			■		■	■	■		■	■		■	■	1



	3D7 _{ICAM}	3D7 _{ICD36}	S20 _{ICAM}	S20 _{CD36}	99 _{ICAM}	99 _{CD36}	106 _{ICAM}	106 _{CD36}	3D7 _{PFD0020c}	3D7 _{PF11_0521}	134 _{ICAM}	134 _{CD36}	MSP1 ₁₉	Malaria (n)
S35														20
S36														7
S37														Nd
S38														Nd
S39														1
S40														4
S41														3
S42														8
S43														1
S44														1
AS1														4
AS2														8
AS3														3
AS4														20
AS5														15
AS6														1
AS7														5
AS8														1
AS9														5
AS10														0
AS11														8
AS12														30
AS13														1
AS14														5
AS15														5
AS16														4
AS17														4
AS18														0
AS19														7
AS20														4
AS21														0
AS22														1
AS23														5
AS24														15
AS25														2
AS26														Nd



	3D7 _{ICAM}	3D7 _{ICD36}	S20 _{ICAM}	S20 _{CD36}	99 _{ICAM}	99 _{CD36}	106 _{ICAM}	106 _{CD36}	3D7 _{PFD0020c}	3D7 _{Pf11_0521}	134 _{ICAM}	134 _{CD36}	MSP1 ₁₉	Malaria (n)
AS27	Light Grey	White	Light Grey	Light Grey	Dark Grey	Light Grey	White	White	Light Grey	Black	Light Grey	White	Black	8
AS28	Light Grey	White	Light Grey	Light Grey	White	White	White	Light Grey	Dark Grey	Light Grey	Light Grey	Light Grey	Light Grey	1
AS29	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	White	White	Light Grey	Dark Grey	Light Grey	White	Light Grey	Light Grey	1
AS30	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	White	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey	3
AS31	Light Grey	Light Grey	Black	Light Grey	Light Grey	Dark Grey	White	White	Dark Grey	Light Grey	Light Grey	Light Grey	Light Grey	2
AS32	Light Grey	Light Grey	Light Grey	Black	Light Grey	Light Grey	Black	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Dark Grey	30
AS33	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	Black	Light Grey	Dark Grey	Dark Grey	Light Grey	Dark Grey	Dark Grey	18
AS34	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	White	White	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	2
AS35	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	Black	Dark Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Dark Grey	20
AS36	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	White	Black	Light Grey	Dark Grey	Light Grey	White	Black	Black	8
AS37	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	White	Light Grey	White	Black	Light Grey	Light Grey	Light Grey	Nd
AS38	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	White	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	Nd
AS39	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	Black	Light Grey	Dark Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	1
AS40	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	White	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	Nd
AS41	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	White	Black	Light Grey	Dark Grey	Light Grey	Dark Grey	Dark Grey	Dark Grey	2
AS42	Light Grey	Light Grey	Light Grey	Black	Light Grey	Light Grey	Black	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	Nd
AS43	Light Grey	Light Grey	Dark Grey	Light Grey	Light Grey	White	Dark Grey	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	20
AS44	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	White	Light Grey	Dark Grey	Light Grey	Light Grey	Light Grey	Light Grey	5
AS45	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	White	Black	Light Grey	Dark Grey	Dark Grey	Light Grey	Light Grey	Light Grey	4

the grey patterns indicate the measured RIs. Light grey indicates RI from 1-3, dark grey indicates RIs from 3-5. From 5-10 are in black, while values above 10 are depicted in hatched patterns. White fields indicate RIs smaller than 1 (non-reacting). The MSP1₁₉ values were measured by ELISA while all other values were obtained by flow cytometry. The numbers on the right indicate previous malaria attacks (unknown/unsure if caused by *Plasmodium vivax* or *Plasmodium falciparum*). ND: not determined.

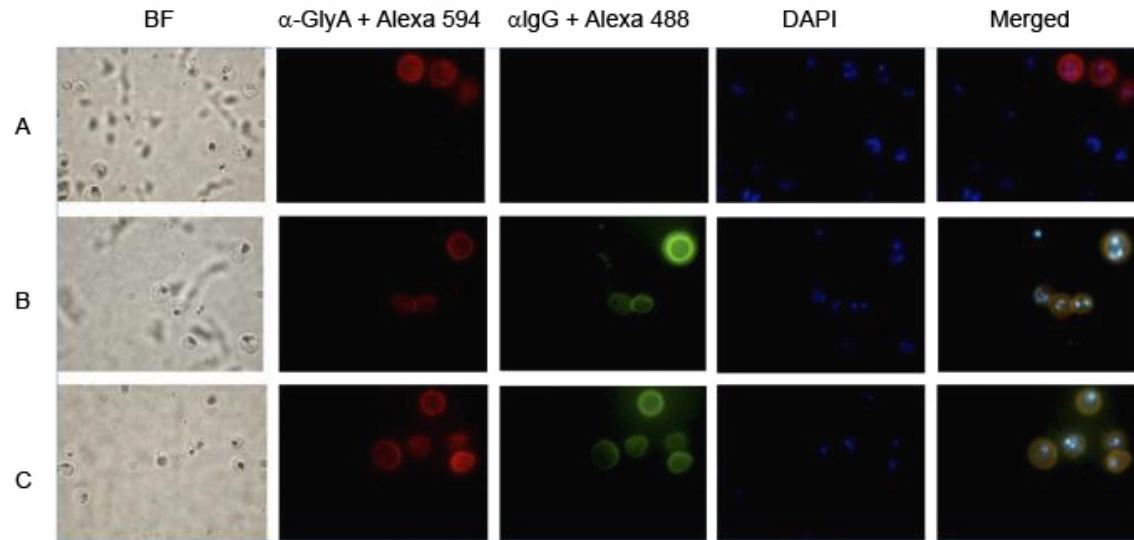


Fig. 1: immunofluorescence of intact infected red blood cell shows labelling exclusively of the RBC surface. Immunofluorescence assays were done as described in Subjects, Materials and Methods. BF: bright field; DAPI (4'-6-diamidino-2-phenylindole): nuclei; merged: overlay of all fluorescent signals; α GlyA + Alexa 594: antiglycophorin antibody labelled with Alexa 594; α IgG + Alexa 488: human antibodies detected with anti-human IgG labelled with Alexa 488.

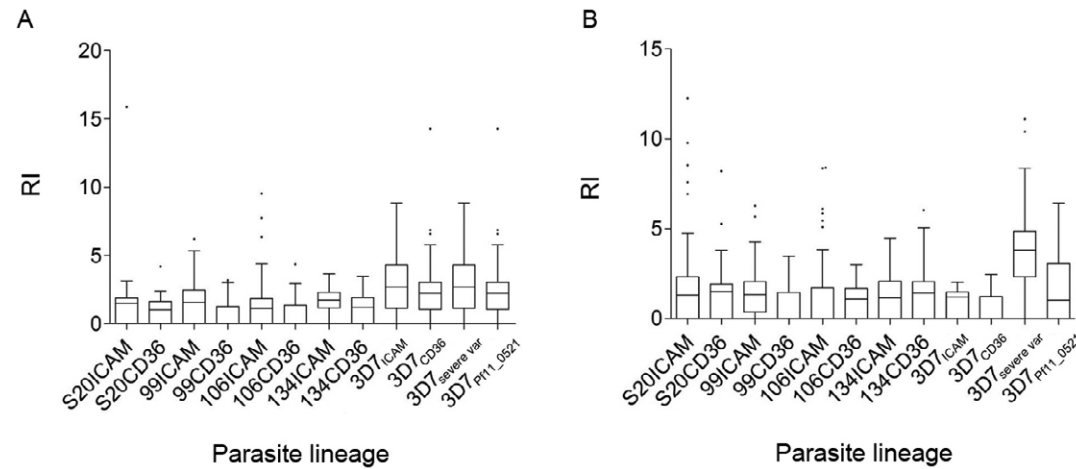


Fig. 2: reactivity indices (RI) complementary to Fig. 3. Shown are median values, 75% percentiles and outliers depicted as whiskers. A: RI for symptomatic plasmas; B: values for asymptomatic plasmas.

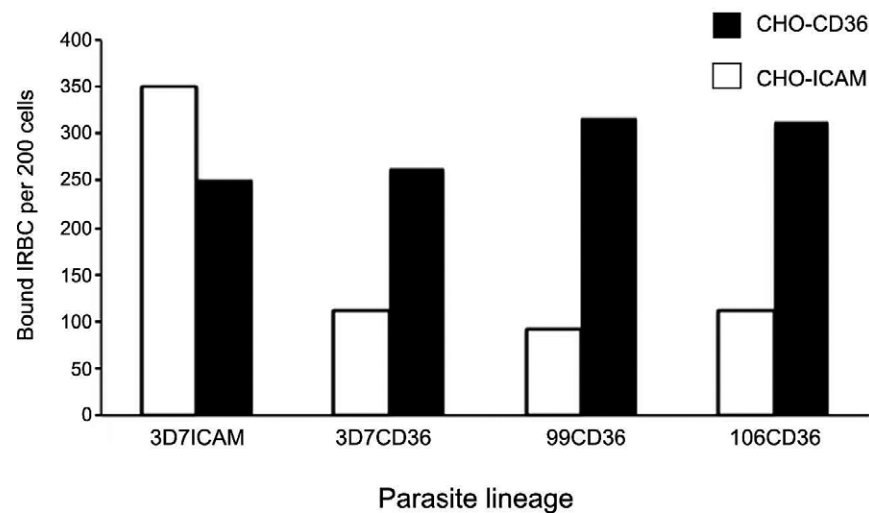


Fig. 3: cytoadherence-selected parasites adhere most to the CHO cell line they were selected for, but also adhere significantly to other cells. The indicated parasites were cytoadherence-selected as described. Trophozoite stage parasites were then tested over CHO-ICAM and CHO-CD36 cell lines and the cytoadherent parasites were counted as described. Shown are data from one of two independent experiments with similar results.

<p>3D7 (from 1-15): PFE1640w, PFD0615c, MAL13P1.1, PFB0010w, PFC1120c, PFD1000c, PFA_0005w, PFF0010w, PFO8_0103, PFD1005c, PFL1970w, PF10_0001, PFD0630c, MAL8P1.220, PFF1580c</p> <p>134 (from 1-25): AJ536708.1, FJ935848.1, FJ935849.1, FJ971356.1, DQ265531.1, FJ935918.1, FJ935917.1, DQ135201.1, DQ265461.1, AJ536708.1, DQ265539.1, AJ536697.1, AJ133811.1, EU787730.1, DQ265550.1, FJ935855.1, FJ935894.1, DQ265490.1, AJ536724.1, AJ536719.1, DQ265435.1, FJ748633.1, DQ265579.1, AJ536744.1, AM115858.1</p> <p>3D7 PFD0020c/PF11_0521 (from 1-21): PFD1235w, PFE0005w, MAL7P1.56, PFA0005w, PFL1970w, PF10_0001, PF07_0139, PFF0845c, PFD0020c, PFF0010w, PFO8_0140, PF11_0521, PFO8_0107, PFF1580c, PFD0630c, PFO8_0106, PFL2665c, PFO8_0140, PFL1950w, PFD1000c, PF10_0406</p>
<p>106 (from 1-16): AJ536719.1, DQ134615.1, AF368935.1, EU787730.1, AJ536740.1, AJ536701.1, AJ536748.1, DQ265595.1, AJ536744.1, DQ135483.1, DQ134446.1, DQ265527.1, DQ134452.1, DQ265540.1, AJ536724.1, AJ536714.1</p> <p>99 (from 1-24): FJ748633.1, DQ265595.1, AJ536748.1, AJ536744.1, DQ367127.1, AJ536730.1, AJ536708.1, DQ265455.1, AJ536719.1, AF368947.1, DQ265461.1, AJ536724.1, FJ971356.1, DQ134452.1, AF368935.1, DQ134448.1, DQ519154.1, AY462833.1, AY462836.1, DQ134466.1, DQ135433.1, DQ519206.1, AM115746.1, AY462842.1</p> <p>S20 (from 1-20): EU787626.1, AJ319685.1, EU787943.1, AJ536721.1, FJ935918.1, AJ536724.1, FJ935911.1, FJ748633.1, EU787730.1, DQ134615.1, FJ935894.1, AF368923.1, AF368927.1, FJ935909.1, DQ134452.1, AF416583.1, DQ135048.1, AF368938.1, AJ536695.1</p>

Fig. 4: GenBank or PlasmoDB entries of the different DBL α sequences from the analysed parasite lineages after selection by panning (3D7, 99, 106, 134, S20) or cloning (3D7_{PFD0020c} and 3D7_{PF11_0521}).