

Supplemental Data

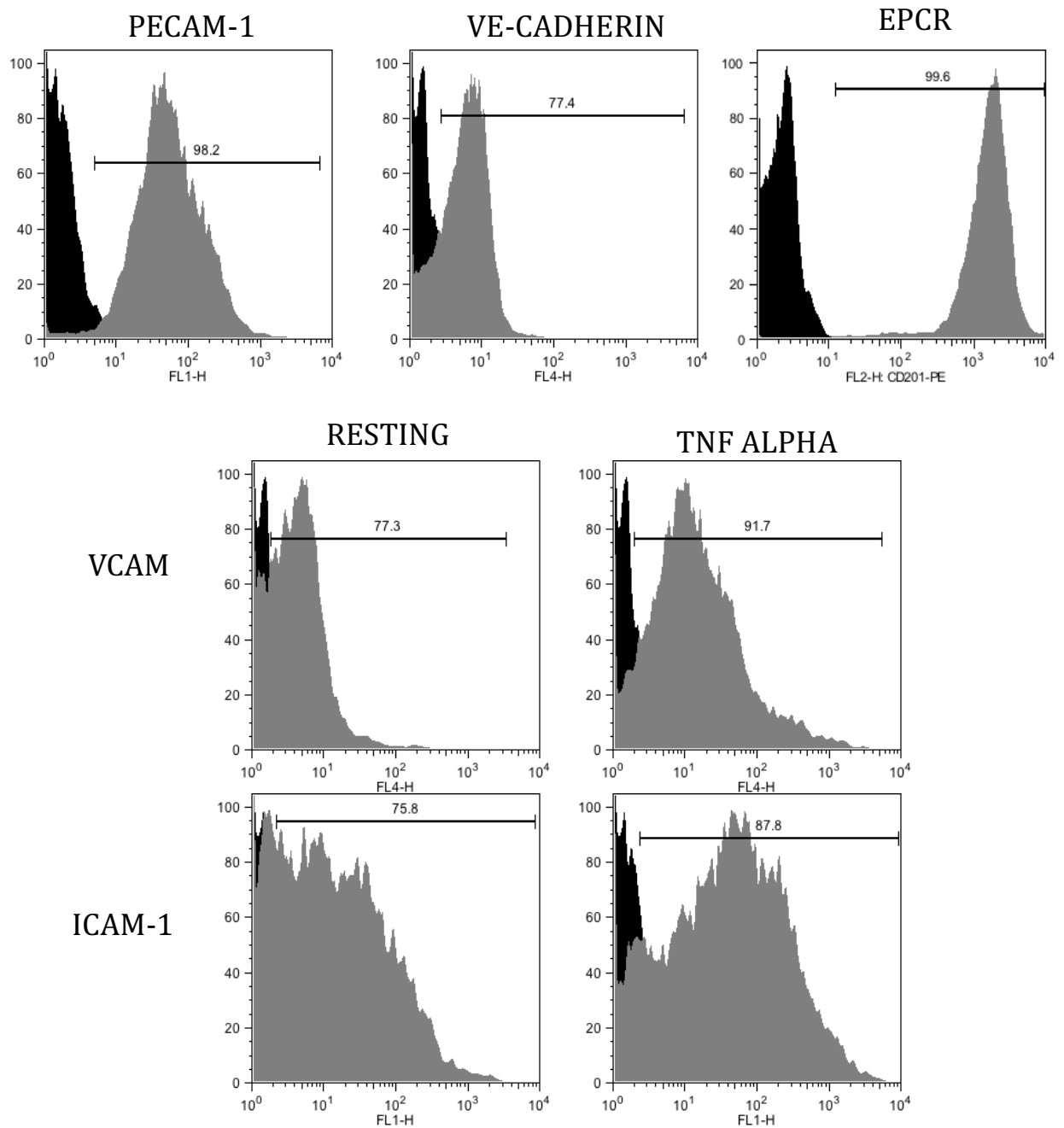


Figure S1. HBMEC express endothelial markers and are responsive to TNF. FACS analysis of HBMEC surface markers PECAM-1 (CD31), VE-Cadherin (CD144) and EPCR. After incubation of HBMEC alone (resting) or with TNF (50ng/ml) for 18 h, HBMEC increase surface expression ICAM-1 and VCAM-1.

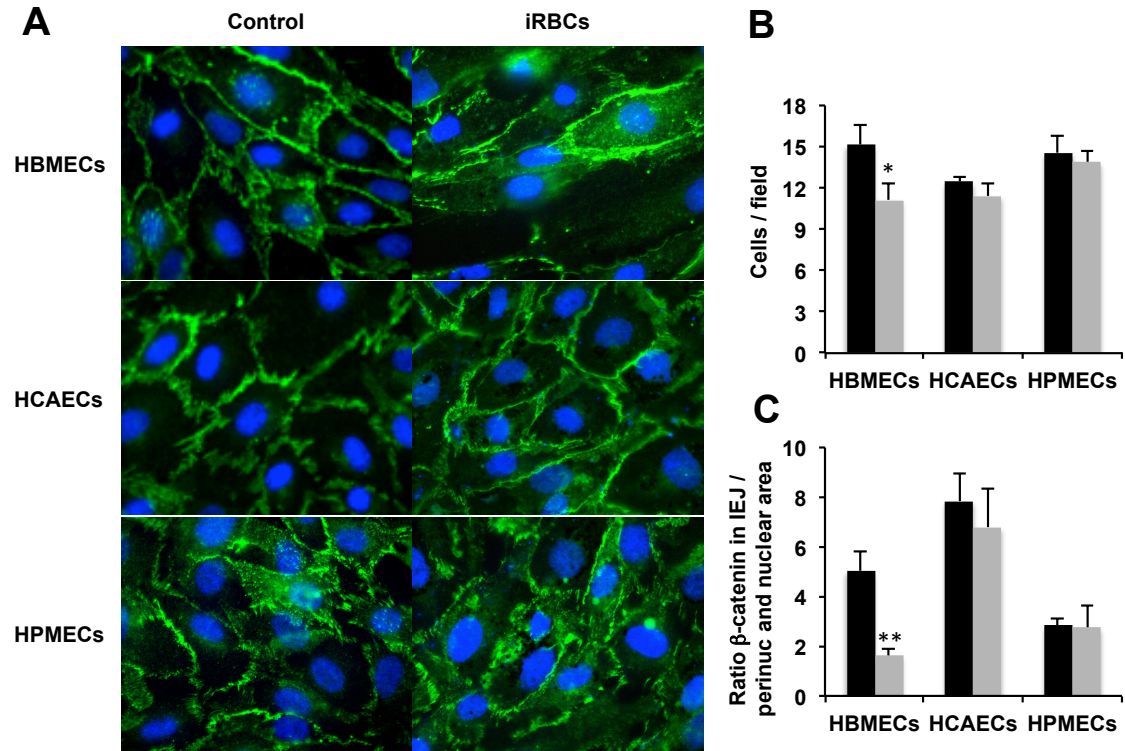


Figure S2. *Pf*-iRBC effect on detachment from substrate and disruption of IEJ in endothelial cells from different origins. Confluent monolayers of human brain microvascular endothelial cells (HBMECs), human coronary artery endothelial cells (HCAECs) and human pulmonary microvascular endothelial cells (HPMECs) were incubated without parasites (Control, black bars) or with 3D7 *P. falciparum* schizonts (1:40) (gray bars). **A**) Immuno-staining for β -catenin (green) and nuclei (blue). **B**) Quantification of the number of cells per microscopic field ($n = 10$). **C**) Quantification of β -catenin fluorescence intensity in the perinuclear and nuclear areas versus IEJ for each cell in 10 microscopic fields. Results are representative of 3 independent experiments. Two-tailed Student *t* test. Error bars represent s.e.m. * $p < 0.05$; ** $p < 0.01$ compared to each cell type control

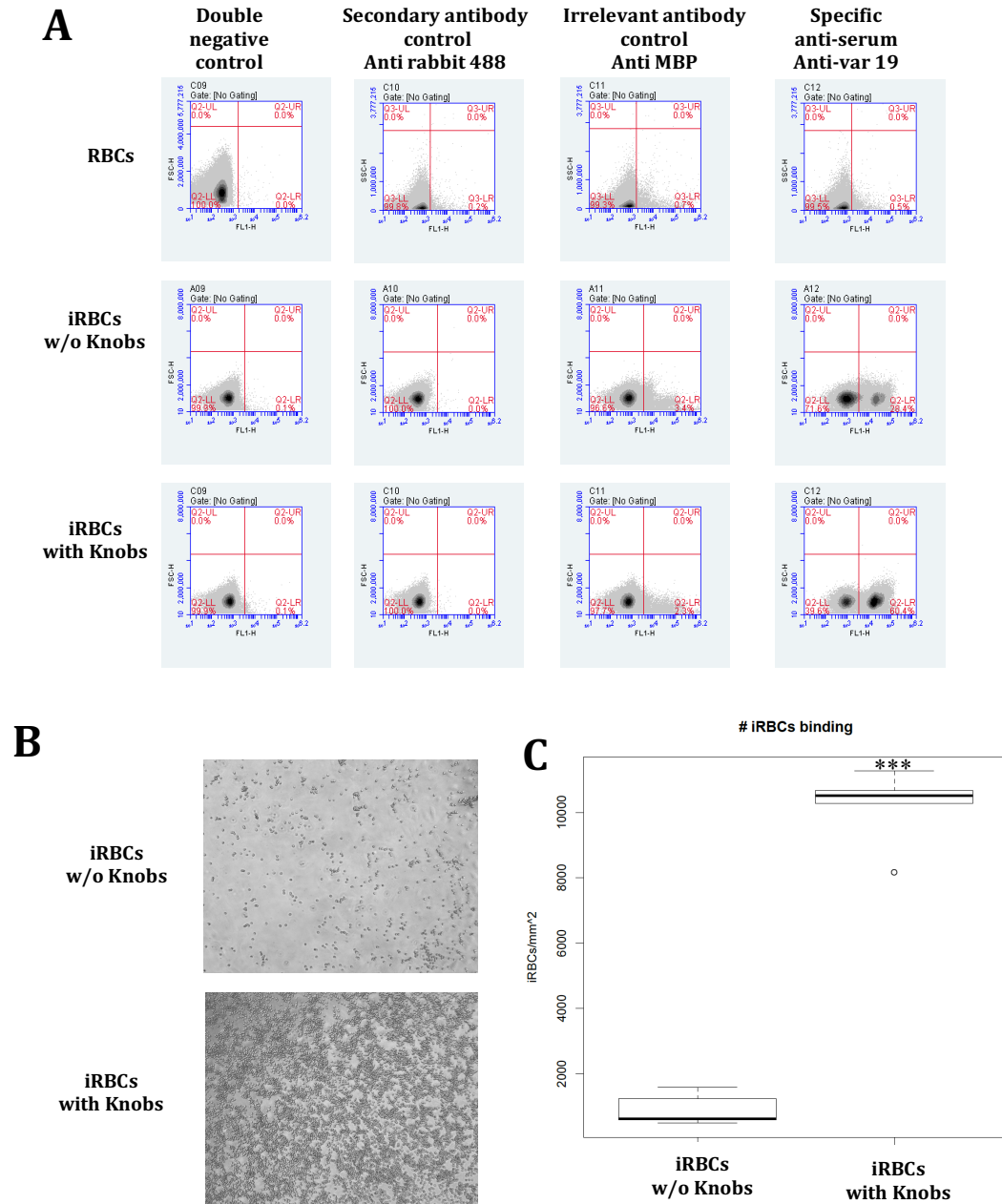


Figure S3. *P. falciparum* IT4var19 expresses var19 on its surface and adheres to HBMEC. *P. falciparum* IT4var19 line was cultured and late stages were separated by the presence of knobs using gelatin flotation. **A)** *P. falciparum* IT4var19 was analyzed by FACS for the expression of var19 in the fractions with knobs and without knobs. **B,C)** Cytoadhesion of both fractions to HBMEC monolayers was imaged (B) and quantified as iRBC per mm² (C). Results are representative of 3 independent experiments. Center lines show the medians; box limits indicate the 25th and 75th percentiles as determined by R software; whiskers extend to minimum and maximum values. Two-tailed Student *t* test. Error bar represent s.e.m. ****p*<0.01.

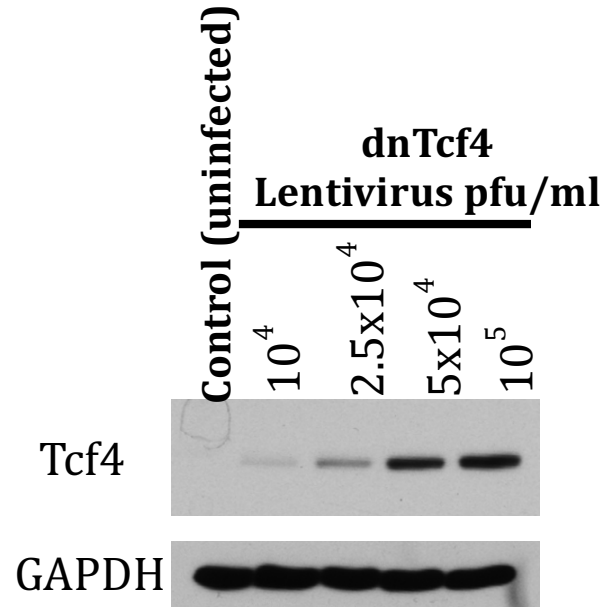


Figure S4. Confirmation of lentivirus-mediated dnTcf4 expression in HBMEC. HBMEC were infected with a lentivirus expressing a dominant negative form of human Tcf4 (dnTcf4). The lentiviral construct was obtained from Addgene (Plasmid #24311). HBMEC in 6-well plates were infected with 2 ml of medium with increasing concentrations of virus for 20 h followed by washing and incubation for additional 24 h before lysing with RIPA buffer. Expression of dnTcf4 was confirmed by Western blotting. Anti-Tcf4 antibody was from Exalpha (X1070M) and anti-GAPDH antibody was from SCBT (sc-32233).

d-GAPDH

36-



1 2 3 4 5



1 2 3 4 5

1 = control
 2 = 2ul
 3 = 5ul
 4 = 10ul
 5 = 20ul

