



Figure S1. Candidate biomarker proteins that are not differentially secreted in response to *P. falciparum* and TNF- α . HBMEC were incubated for the indicated time points with media (black line), TNF- α (1 μ g/mL; gray line), RBCL (8×10^6 RBC/cm 2 ; pink line) or *P. falciparum*-iRBCL (8×10^6 iRBC/cm 2 ; purple line). Levels of candidate biomarker proteins were determined in the medium of duplicated culture wells by ELISA.

Gene symbol	Protein	P adjusted
<i>ADAMTS4</i>	ADAM metalloproteinase with thrombospondin type 1 motif 4	1.81E-09
<i>ADAMTS18</i>	ADAM metalloproteinase with thrombospondin type 1 motif 18	1.84E-07
<i>ADM2</i>	Adrenomedullin 2	4.89E-31
<i>ANGPTL4</i>	Angiopoietin like 4	4.24E-57
<i>BMP2</i>	Bone morphogenetic protein 2	1.69E-08
<i>BDNF</i>	Brain derived neurotrophic factor	2.26E-12
<i>BCAN</i>	Brevican	0.000594018
<i>CCL2</i>	C-C motif chemokine ligand 2	2.24E-27
<i>CCL20</i>	C-C motif chemokine ligand 20	4.79E-09
<i>CXCL1</i>	C-X-C motif chemokine ligand 1	8.50E-19
<i>CXCL2</i>	C-X-C motif chemokine ligand 2	6.66E-16
<i>CXCL3</i>	C-X-C motif chemokine ligand 3	4.48E-10
<i>CXCL6</i>	C-X-C motif chemokine ligand 6	2.95E-09
<i>CXCL8</i>	C-X-C motif chemokine ligand 8	3.15E-28
<i>CX3CL1</i>	C-X3-C motif chemokine ligand 1	0.013416408
<i>C12orf73</i>	Chromosome 12 open reading frame 73	4.52E-07
<i>F3</i>	Coagulation factor III, tissue factor	1.31E-09
<i>CSF2</i>	Colony stimulating factor 2	0.023109419
<i>CSF3</i>	Colony stimulating factor 3	0.038339442
<i>C3</i>	Complement C3	0.022496086
<i>CRELD2</i>	Cysteine rich with EGF like domains 2	2.61E-16
<i>EBI3</i>	Epstein-Barr virus induced 3	0.000496793
<i>ESM1</i>	Endothelial cell specific molecule 1	9.03E-05
<i>ERFE</i>	Erythroferrone	2.86E-07
<i>FGF5</i>	Fibroblast growth factor 5	5.26E-09
<i>FST</i>	Follistatin	7.76E-09
<i>GDF15</i>	Growth differentiation factor 15	2.23E-41
<i>HBEGF</i>	Heparin binding EGF like growth factor	4.33E-09
<i>INHBA</i>	Inhibin beta A subunit	0.014380204
<i>INHBE</i>	Inhibin beta E subunit	4.30E-06
<i>IL1A</i>	Interleukin 1 alpha	4.15E-14
<i>IL1B</i>	Interleukin 1 beta	3.38E-06
<i>IL11</i>	Interleukin 11	0.023191129
<i>IL23A</i>	Interleukin 23 subunit alpha	0.009203239
<i>IL32</i>	Interleukin 32	0.003289992
<i>IL6</i>	Interleukin 6	1.92E-24
<i>KISS1</i>	KiSS-1 metastasis-suppressor	9.40E-05
<i>KITLG</i>	KIT ligand	4.01E-10
<i>LAMB3</i>	Laminin subunit beta 3	0.000297035
<i>LAMC2</i>	Laminin subunit gamma 2	0.020668401
<i>LIF</i>	Leukemia inhibitory factor	1.64E-07
<i>LCN6</i>	Lipocalin 6	0.04657047
<i>MMP10</i>	Matrix metalloproteinase 10	1.06E-08
<i>MANF</i>	Mesencephalic astrocyte derived neurotrophic factor	2.99E-28
<i>NRG1</i>	Neuregulin 1	3.59E-11
<i>PTH1H</i>	Parathyroid hormone like hormone	0.036146238
<i>PTX3</i>	Pentraxin 3	4.58E-11
<i>RELN</i>	Reelin	2.90E-11
<i>REN</i>	Renin	0.039139873
<i>RSPO3</i>	R-spondin 3	0.009993491
<i>SEMA3A</i>	Semaphorin 3A	5.38E-16
<i>SERPINB2</i>	Serpin family B member 2	0.000160109
<i>STC2</i>	Stanniocalcin 2	4.74E-33
<i>SDC4</i>	Syndecan 4	7.65E-09
<i>TGFB2</i>	Transforming growth factor beta 2	3.57E-05

<i>TUFT1</i>	Tuftelin 1	3.14E-12
<i>TNFSF15</i>	Tumor necrosis factor superfamily member 15	4.60E-10
<i>TNF</i>	Tumor necrosis factor	0.000650306
<i>VEGFA</i>	Vascular endothelial growth factor A	4.02E-23
<i>VEGFC</i>	Vascular endothelial growth factor C	5.19E-16
<i>VSTM1</i>	V-set and transmembrane domain containing 1	0.001304636

Table S1 – HBMECs significantly upregulated genes encoding for predicted secreted proteins in response to iRBCL compared to RBCL (*P* adjusted <0.05).

Gene symbol	Protein	Foldchange iRBCL vs TNF- α
<i>ADAMTS18</i>	ADAM metalloproteinase with thrombospondin type 1 motif 18	2.44
<i>ADM2</i>	Adrenomedullin 2	8.80
<i>ANGPTL4</i>	Angiopoietin like 4	6.89
<i>BDNF</i>	Brain derived neurotrophic factor	3.58
<i>BCAN</i>	Brevican	4.80
<i>C12orf73</i>	Chromosome 12 open reading frame 73	2.74
<i>ERFE</i>	Erythroferrone	3.48
<i>GDF15</i>	Growth differentiation factor 15	4.19
<i>INHBE</i>	Inhibin beta E subunit	23.04
<i>IL1A</i>	Interleukin 1 alpha	3.75
<i>IL11</i>	Interleukin 11	5.58
<i>IL6</i>	Interleukin 6	3.83
<i>KISS1</i>	KiSS-1 metastasis-suppressor	4.14
<i>KITLG</i>	KIT ligand	2.79
<i>LIF</i>	Leukemia inhibitory factor	2.05
<i>LCN6</i>	Lipocalin 6	5.28
<i>NRG1</i>	Neuregulin 1	2.10
<i>RELN</i>	Reelin	9.44
<i>REN</i>	Renin	2.92
<i>STC2</i>	Stanniocalcin 2	2.21
<i>TUFT1</i>	Tuftelin 1	2.29
<i>VEGFA</i>	Vascular endothelial growth factor A	2.44

Table S2 – HBMECs genes from Table S1 induced at least 2-fold in response to incubation with iRBCL compared to TNF- α .