

ELECTRONIC SUPPLEMENTARY MATERIALS

Table P1. Densitometric semiquantitative analysis of the results of dot-blot profiling of concentrated (3-fold) serum-free culture medium from primary human coronary artery endothelial cells (HCAEC) and primary human internal thoracic artery endothelial cells (HITAEC) after their incubation with FBSD (control), free Ca^{2+} ions, KPM-A, or HRP-A (10 μg calcium per 1 mL of culture medium) for 24 hours

Location on the membrane	Analyzed molecule	gene ID	Alternative title	Primary coronary artery endothelial cells (HCAEC)							Primary endothelial cells of the internal thoracic artery (HITAEC)						
				FSBD	Ca ²⁺	Crank change.	KPM-A	Crank change.	HRC-A	Crank change.	FSBD	Ca ²⁺	Crank change.	KPM-A	Crank change.	HRC-A	Crank change.
A7,8	Angiogenin	283	-	24618	22306	0,91	27640	1,12	20858	0,85	24839	23310	0,94	20809	0,84	22621	0,91
A11,12	Angiopoietin-2	285	Ang-2, ANGPT2	39446	41536	1,05	46879	1,19	46307	1,17	56804	53690	0,95	50028	0,88	51397	0,90
B13,14	Cystatin C	1471	CST3, ARMD11								2129		NA		NA		NA
B15,16	Dkk-1	22943	Dickkopf-1	49277	49151	1,00	51339	1,04	50373	1,02	48037	48457	1,01	42590	0,89	46119	0,96
B19,20	EGF	1950	Epidermal growth factor	49837	50883	1,02	54361	1,09	48444	0,97	50464	46650	0,92	49213	0,98	44620	0,88
B21,22	EMMPRIN	682	CD147, basigin	1656	3172	1,92	2424	1,46	18903	11,41	30665	13828	0,45	1222	0,04	11531	0,38
C5,6	Endoglin	2022	CD105, ENG	19786	22714	1,15	23085	1,17	36411	1,84	45046	38834	0,86	37059	0,82	38889	0,86
C19,20	GDF-15	9518	MIC-1	36403	33009	0,91	32834	0,90	32975	0,91	37739	35984	0,95	34330	0,91	31570	0,84
D1,2	Groα	2919	CXCL1, MSGA-α	5366	7107	1,32	7505	1,40	9869	1,84	11428	4540	0,40	1590	0,14	7782	0,68
E7,8	IL-8	3576	CXCL8	44269	52337	1,18	48161	1,09	53631	1,21	45576	46005	1,01	48654	1,07	50395	1,11
E23,24	IL-18 Bpa	10068	-	5263	2373	0,45	1383	0,26	2905	0,55						744	NA
G7,8	MCP-1	6347	CCL2, MCAF	23259	23311	1,00	28489	1,22	30647	1,32	22141	22496	1,02	22120	1,00	23654	1,07
G13,14	MIF	4282	-	10727	10617	0,99	16646	1,55	28821	2,69	31249	25572	0,82	19598	0,63	25768	0,82
G19,20	MIP-3α	6364	CCL20, Exodus-1, LARC.						1872	NA	728		NA		NA	9113	12,52
H5,6	PDGF-AA	5154	-	4708	2622	0,56		NA		NA	1698	8016	4,72		NA		NA
H7,8	PDGF-AB/BB	5154/5155	-	7855	8714	1,11	5289	0,67	6551	0,83	14122	6033	0,43	615	0,04	2043	0,14
H9,10	Pentraxin-3	5806	-	43765	46116	1,05	43384	0,99	39498	0,90	46991	44676	0,95	41930	0,89	43785	0,93
H15,16	RANTES	6352	CCL5								3033	6080	2,00	2810	0,93	6271	2,07
I1,2	Serpin E1.	5054	PAI-I, PAI-1, nexin.	44035	47253	1,07	52103	1,18	57092	1,30	43835	39644	0,90	46035	1,05	51284	1,17
I5,6	ST2	9173	IL-1 R4, IL1RL1, ST2L	33116	28677	0,87	33031	1,00	33855	1,02	19809	26456	1,34	25898	1,31	29545	1,49
I9,10	TFF3	7033	ITF, TFI								26498	24181	0,91	26393	1,00	18300	0,69
I15,16	Thrombospondin-1	7057	THBS1, TSP-1	23776	17193	0,72	21641	0,91	20197	0,85	27751	23911	0,86	25653	0,92	23717	0,85
I19,20	uPAR	5329	PLAUR	9508	3249	0,34	15190	1,60	12976	1,36	12825	6045	0,47	3412	0,27	27637	2,15
I21,22	VEGF	7422	BEGFA	48187	46217	0,96	55445	1,15	52182	1,08	50120	48790	0,97	50016	1,00	53143	1,06
J7,8	CD31	5175	PECAM-1	45629	42637	0,93	49371	1,08	47547	1,04	45415	44919	0,99	39327	0,87	50559	1,11

Table P2. Densitometric semi-quantitative analysis of the results of dot-blot profiling of concentrated (7-fold) serum-free culture medium from primary human monocytes after incubation with FBSD (control), free Ca²⁺ ions, KPM-A or KHR-A (10 µg calcium per 1 ml of culture medium) for 24 hr

Location on the membrane	Analyzed molecule	gene ID	Alternative title	FBSD	Ca ²⁺	Crank change.	KPM-A	Crank change.	HRC-A	Crank change.
A3,4	Adiponectin	9370	Acrp30						23587	NA
A5,6	Apolipoprotein A-I	335	ApoA1						26893	NA
A7,8	Angiogenin	283	-	12739	12485	0,98	7153	0,56	9023	0,71
B5,6	Chitinase 3-like 1	1116	CHI3L1, YKL-40.		2534	NA	11469	NA	13002	NA
B19,20	EGF	1950	Epidermal growth factor	49040	52929	1,08	44607	0,91	52356	1,07
B21,22	EMMPRIN	682	CD147, basigin	5102	6076	1,19	1609	0,32		NA
C3,4	ENA-78	6374	CXCL5	34053	28109	0,83	34586	1,02	51179	1,50
D1,2	Groα	2919	CXCL1, MSGA-α						9582	NA
E5,6	IL-6	3569	-						25411	NA
E7,8	IL-8	3576	CXCL8	47504	56395	1,19	52568	1,11	52050	1,10
G5,6	Lipocalin-2	3934	NGAL, LCN2, siderocalin.	26229	32760	1,25	34813	1,33	34735	1,32
G7,8	MCP-1	6347	CCL2, MCAF	16968	12508	0,74	13617	0,80	17327	1,02
G9,10	MCP-3	6354	CCL7, MARC	9519	3116	NA	2530	0,27	2310	0,24
G13,14	MIF	4282	-	27340	30407	1,11	27129	0,99	23117	0,85
G17,18	MIP-1α/MIP-1β	6348/6351	CCL3/CCL4	31564	28530	0,90	32675	1,04	36667	1,16
G19,20	MIP-3α	6364	CCL20, Exodus-1, LARC.	29481	1911	0,06	24541	0,83	39944	1,35
G23,24	MMP-9	4318	CLG4B, gelatinase B	22443	30577	1,36	31666	1,41	57505	2,56
H5,6	PDGF-AA	5154	-	19123	7730	0,40		NA	784	0,04
H7,8	PDGF-AB/BB	5154/5155	-	24979	25096	1,00	16020	0,64	13582	0,54
H11,12	PF4	5196	CXCL4	56202	56300	1,00	58715	1,04	58910	1,05
H15,16	RANTES	6352	CCL5	50535	50741	1,00	51632	1,02	52982	1,05
I1,2	Serpin E1.	5054	PAI-I, PAI-1, nexin.	43384	44096	1,02	45354	1,05	60274	1,39
I15,16	Thrombospondin-1	7057	THBS1, TSP-1	27931	27843	1,00	24558	0,88	23758	0,85
I19,20	uPAR	5329	PLAUR	5298	3811	0,72	4368	0,82	8414	1,59
I21,22	VEGF	7422	BEGFA	50825	55619	1,09	54857	1,08	57409	1,13
J7,8	CD31	5175	PECAM-1	42628	34939	0,82	27563	0,65	34828	0,82

Table P3. Densitometric semiquantitative analysis of dot-blot profiling results of unconcentrated rat serum 1 hour after intravenous administration of FSBD (control), free Ca²⁺ ions, CPM-A, or CHR-A (10 µg calcium per 1 mL blood)

Location on the membrane	Analyzed molecule	gene ID	Alternative title	FSBD	Ca ²⁺	Crank change.	KPM-A	Crank change.	HRC-A	Crank change.
A3,4	Adiponectin/Acrp30	246253	AdipoQ	54728	85662	1,57	64660	1,18	61819	1,13
A5,6	CCL2/JE/MCP-1	24770	MCAF	17187	18758	1,09	30792	1,79	21120	1,23
A9,10	CCL5/RANTES	81780	SISd	12382	13928	1,12	13164	1,06	2075	0,17
A11,12	CCL11/Eotaxin	29397	C-C motif ligand 11	45852	46624	1,02	96675	2,11	43271	0,94
A13,14	CCL17/TARC	117518	ABCD-2, C-C motif chemokine 17	10099	8685	0,86	21787	2,16	12173	1,21
A15,16	CCL20/MIP-3α	29538	Exodus-1, LARC	7878	5330	0,68	11376	1,44	6221	0,79
A17,18	CCL21/6Ckine	298006	C-C motif ligand21	40915	46167	1,13	43471	1,06	42743	1,04
A19,20	CCL22/MDC	117551	ABCD-1, STCP-1	41781	33661	0,81	35054	0,84	28758	0,69
A21,22	Clusterin	24854	CLU, apolipoprotein J	12685	13379	1,05	13968	1,10	11256	0,89
B3,4	CNTF	25707	HCNTF		5103	NA	9678	NA	1340	NA
B5,6	CX3CL1/fractalkine	89808	FKN, neurotactin	3226	7686	2,38	8746	2,71	5356	1,66
B7,8	CXCL2/GROβ/MIP-2/CINC-3	114105	GRO2		1492	NA	2191	NA		
B9,10	CXCL7/thymus chemokine-1	246358	-	17466	26319	1,51	26574	1,52	19007	1,09
B11,12	Cyt61/CCN	83476	-	8230	13485	1,64	15928	1,94	6946	0,84
B13,14	Cystatin C	25307	ARMD11, CST3, Gamma-trace.	65501	70925	1,08	61454	0,94	62101	0,95
B15,16	DPPIV/CD26	25253	Dpp4, Dipeptidyl peptidase IV	39161	42563	1,09	37270	0,95	37654	0,96
B21,22	Endostatin	85251	Col18a1	26343	27176	1,03	33808	1,28	24944	0,95
C3,4	Fetuin-A/AHSG	25573	Alpha-2-HS-glycoprotein.	19776	23381	1,18	24883	1,26	26609	1,35
C9,10	FGF-21	170580	Fibroblast growth factor 21	4700	28103	5,98	9232	1,96	32309	6,87
C11,12	Fibulin-3	305604	DHRD, EFEMP1,FBLN3	17580	30087	1,71	25968	1,48	25666	1,46
C13,14	Flt-3-ligand	100363556	Flt3lg	37607	37862	1,01	39429	1,05	31762	0,84
C15,16	Galectin-1	56646	GAL1, GBP, HBL, LGALS1	17393	19201	1,10	28443	1,64	20094	1,16
C17,18	Galectin-3	83781	AGE-R3, L-31,GAL3	10076	9769	0,97	12857	1,28	13214	1,31
C21,22	GDF-15	29455	MIC-1	9328	14743	1,58	23693	2,54	37276	4,00
D1,2	GM-CSF	116630	Csf2		10086	NA	12013	NA	952	NA
D3,4	Hepassocin	246186	FGL1, FREP1, HFREP-1	19832	24843	1,25	25291	1,28	27640	1,39
D5,6	HGF	24446	HGFB, hematopoietin-A.	1743	1808	1,04	19733	11,32	1372	0,79
D7,8	ICAM-1/CD54	25464	-	40536	42846	1,06	43229	1,07	43743	1,08
D9,10	IFN-γ	25712	IFNG		983	NA	744	NA	542	NA
D11,12	IGF-1	24482	IBP1, IGF-1A, IGF-1B, somatomedin C	41571	44169	1,06	41422	1,00	45760	1,10
D13,14	IGFBP-2	25662	BP2,IBP2,IGF-BP53	77848	36757	0,47	34811	0,45	38088	0,49
D15,16	IGFBP-3	24484	IBP3	74403	43756	0,59	53661	0,72	64310	0,86
D17,18	IGFBP-5	25285	IBP5IBP-5	35735	37221	1,04	39690	1,11	33068	0,93
D19,20	IGFBP-6	25641	IBP6	44939	43284	0,96	42817	0,95	44513	0,99
D21,22	IL-1α/IL-1F1	24493	-		1927	NA				
E1,2	IL-1ra/IL-1F3	60582	IL1RN		2934	NA			226	NA
E3,4	IL-2	116562	T-lymphocyte growth factor		1151	NA	891	NA	607	NA
E5,6	IL-3	24495	Hematopoietic growth factor		826	NA	583	NA	1518	NA
E9,10	IL-6	24498	B-lymphocyte stimulation factor				510	NA		
E11,12	IL-13	116553	NC30, P600		743	NA	347	NA		
E17,18	Jagged 1	29146	AGS, CD339	57475	61685	1,07	48403	0,84	60272	1,05
E19,20	LIF	60584	CDF, D-factor, DIA.	6543	8588	1,31	1286	0,20	1293	0,20
E21,22	Lipocalin-2/NGAL	170496	Siderocalin, 24p3	35962	37580	1,04	0	0,00	36758	1,02
E23,24	LIX	60565	CXCL5, GCP-2, ENA-78.	46438	46421	1,00	48617	1,05	48977	1,05
F1,2	MAG/Siglec-4a	29409	S-MAG		5761	NA	2910	NA	686	NA

F3,4	MMP-2	81686	Gelatinase A	17272	20573	1,19	16369	0,95	19135	1,11
F5,6	MMP-3	171045	Stromelysin-1	17476	21574	1,23	23880	1,37	35750	2,05
F7,8	MMP-9	81687	Clg4b, gelatinase B, GELB	25079	17558	0,70	30763	1,23	30355	1,21
F9,10	Nepriylsin/CD10	24590	Atripeptidase, CALLA.	656			358	0,55		
F11,12	NOV/CCN3	81526	IBP-9, IGFBP-9	28032	24582	0,88	25638	0,91	29468	1,05
F13,14	NT-3	83576	3-nucleotidase	944	0	0,00	1102	1,17	3203	3,39
F15,16	NT-4	25730	NTF4, NTF5, GLC10	489			445	0,91		
F17,18	Osteopontin	25353	Eta-1, Spp1	29937	30928	1,03	32372	1,08	30622	1,02
F19,20	Osteoprotegerin/TNFRSF11B	25341	OPG, Ocif	12098	6942	0,57	8460	0,70	7820	0,65
F21,22	PDGF-BB	24628	PDGFBB	21105	2487	0,12	15888	0,75	3287	0,16
F23,24	Pref-1/DLK1/FA1	114587	DLK1, pG2, ZOG	27971	29355	1,05	24783	0,89	35984	1,29
G1,2	Prolactin	24683	PRL		14371	NA	25257	NA	33005	NA
G3,4	RAGE	81722	AGER	10225	11826	1,16	19860	1,94	13518	1,32
G5,6	RBP4	25703	Retinol-binding protein 4	28432	30583	1,08	31829	1,12	35626	1,25
G7,8	Resistin	246250	ADSF, FIZZ3	34269	36410	1,06	40122	1,17	39170	1,14
G9,10	RGM-A	308739	RGMA	60687	40008	0,66	44144	0,73	41722	0,69
G11,12	SCF	60427	c-kit ligand, FPH2, KITLG	7872	8958	1,14	7284	0,93	5180	0,66
G13,14	Serpin E1/PAI-1	24617	Nexin, PLANH1	35601	33297	0,94	34243	0,96	57346	1,61
G15,16	TIM-1/KIM-1/HAVCR	140898	CD365, HAVCR1	20002	25892	1,29	15983	0,80	12948	0,65
G19,20	TWEAK/TNFSF12	360548	APO3-ligand	2557	977	0,38	609	0,24	907	0,35
G21,22	VCAM-1/CD106	25361	LICAM, INCAM-100	31178	30878	0,99	28508	0,91	30880	0,99
G23,24	VEGF	83785	VEGF-A, VPF	1799	802	0,45	2839	1,58	483	0,27
H5,6	WISP-1/CCN4	65154	WISP1c, WISP1i	46550	40924	0,88	45347	0,97	42040	0,90

Table P4. Primer sequences for quantitative polymerase chain reaction after reverse transcription

Gene	Forward Primer	Reverse Primer
Proinflammatory activation of the endothelium		
<i>VCAM1</i>	5'-CGTCTTGGTGGTCAGCAGCCCTTCCT-3'	5'-ACATTCATCATATACTCCCGCATCGCATCCTTC-3'
<i>ICAM1</i>	5'-TTGGGGGCGATAGAGAGAGACCCCGTT-3'	5'-GCACACATTGCTCAGTTCAGTTCATACACC-3'
<i>SELE</i>	5'-GCACACAGCAGCCTTGTGTCCAACC-3'	5'-ACCTCACCAAACCACCCCTTCG-3'
<i>SELP</i>	5'-ATGGGGGTGGTGGGAACCAAAAAGG-3'	5'-GGCTGACGGACTCTTGATGTAT-3'
<i>IL6</i>	5'-GGCACTGGCAGAAAACAACC-3'	5'-GCAAGTCTCTCCTCATTCAATGAATCC-3'
<i>CXCL8</i>	5'-CAGAGACAGCAGCAGAGCACACAC-3'	5'-AGTTCTTTTTAGCACTCCTTGGC-3'
<i>CCL2</i>	5'-TTCTGTGTGCCTGCTGCTGCTGCTCATAG-3'	5'-AGGTGTGACTGGGGGGGGCATTGATTG-3'
<i>CXCL1</i>	5'-GCTTGCCTCAATCCTGCATCC-3'	5'-ACAATCCAGGTGGTGGTGGCCTCTGC-3'
<i>MIF</i>	5'-GGTGTGTCCGAGAAGTCAGGCA-3'	5'-GGGGGGCACGACGTTGTTTGTGTTTACG-3'
Nitric oxide biosynthesis		
<i>NOS3</i>	5'-GTGATGGATGGCGAAGCGAGTGAAG-3'	5'-CCGAGCCCCGAACACACACACAGAAC-3'
Endothelial-mesenchymal transition		
<i>SNAIL</i>	5'-CAGACCCCCACTCAGATGTCAAGAA-3'	5'-GGGGCAGGCAGGTATGGAGGAGGAAGA-3'
<i>SNAIL2</i>	5'-ACTCCCCGAAGCCAAAAGCCAAATGACAA-3'	5'-CTCTCTCTCTCTCTGTGGTGGTGTGTGTGTGT-3'
<i>TWIST1</i>	5'-GTCCGCAGTCTTACGAGGAG-3'	5'-GCTTGAGGGGGTCTGAATCTTGCT-3'
<i>ZEB1</i>	5'-GATGATGAATGAATGCGAGTCAGATGC-3'	5'-ACAGCAGCAGTGTGTCTTGTGTTGTTGT-3'
The "housekeeping" genes		
<i>ACTB</i>	5'-CATCGAGCACGGCACGGCATCGTCA-3'	5'-TAGCACAGCAGCCTGGGGACAGCAAC-3'
<i>GAPDH</i>	5'-AGCCACATCGCTCAGACACAC-3'	5'-GCCCAATACGACCAATCC-3'
<i>B2M</i>	5'-TCCATCCGACACATTGAAGTTG-3'	5'-CGGCAGGCAGGCATACTCATCATCTT-3'

