

Collagen I fibrous substrates modulate the proliferation and secretome of estrogen receptor-positive breast tumor cells in a hormone-restricted microenvironment

Ana M. Reyes-Ramos^a, Yasmín R. Álvarez-García^b, Natalia Solodin^c, Jorge Almodovar^d, Elaine T. Alarid^c, Wandaliz Torres-Garcia^c and Maribella Domenech^{a*}

^a Department of Chemical Engineering, University of Puerto Rico – Mayagüez, Call Box 9000, Mayagüez, Puerto Rico 00681-9000, USA

^b Department of Chemistry, University of Wisconsin – Madison, Madison, WI 53706 USA

^c Department of Oncology, McArdle Laboratories for Cancer Research and University of Wisconsin Carbone Comprehensive Cancer Center, University of Wisconsin – Madison, 1111 Highland Avenue, Madison, WI 53705, USA

^d Ralph E. Martin Department of Chemical Engineering, University of Arkansas, 3202 Bell Engineering Center, Fayetteville, AR 72701, USA

^e Department of Industrial Engineering, University of Puerto Rico – Mayagüez, Call Box 9000, Mayagüez, Puerto Rico 00681-9000, USA

**Corresponding author. maribella.domenech@upr.edu*

Pages: 24

Figures: 5

Tables:1

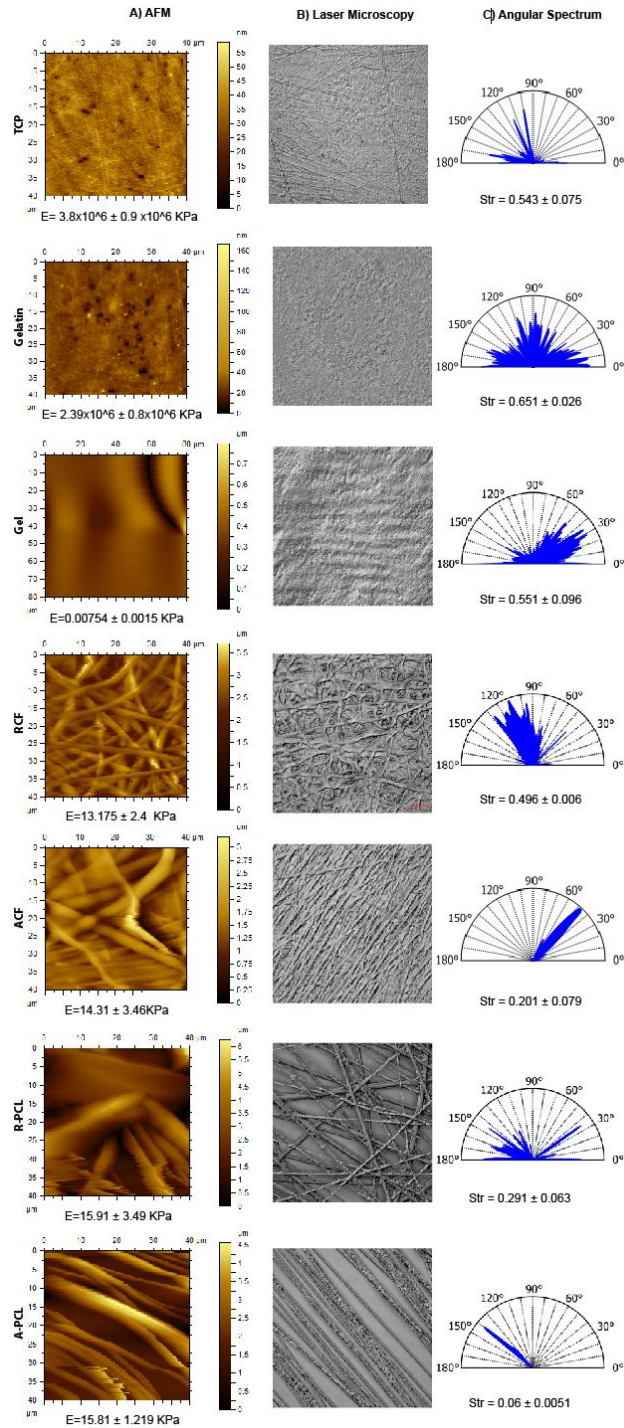


Figure S1-Sn. Representative images of the fiber organization on the substrate surface. A) AFM technique to obtain young's modulus of all the substrates. B) Surface orientation through a 3D laser confocal microscope C) Angle spectrum of each substrate with their respective Str value which provide information related to the uniformity of the surface texture. Data represent the means of 4-6 independent batches of substrates with $n = 4-10 \pm SE$.

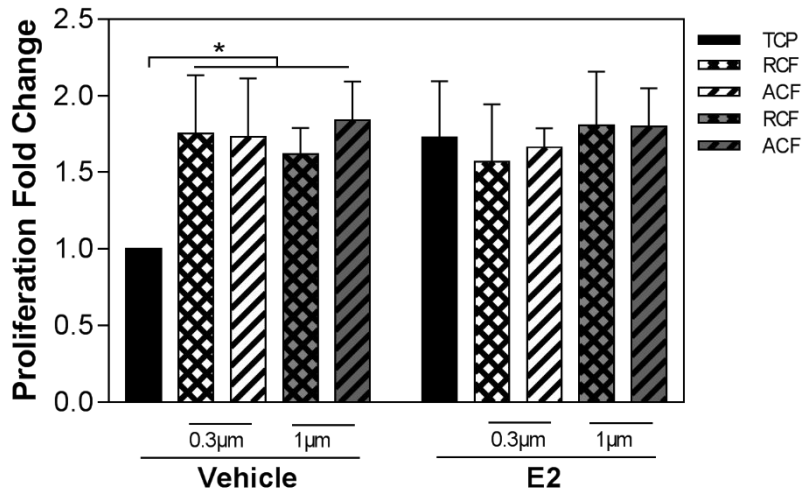


Figure S2-Sn. ER signaling in MCF-7 cells cultured on collagen fibrous substrates of different fibril diameter. Proliferation analysis of the MCF-7 cells treated with 1nM of E2 during cultured on TCP, RCF and ACF substrates. Proliferation analysis of MCF-7 is relative to TCP without estrogen (Vehicle). Data represent the average of 3-4 independent experiments with n=3-4, SE, *p<0.05.

ER transactivation of MCF-7 MVLN cells

We used a modification of the immortalized ER (+) human mammary epithelial cell line MCF7, (MCF7-MVLN) that has previously been transfected with an ERE-luciferase construct. Cells were maintained as mentioned in section 2.1. For this analysis, cells were maintained with 10% charcoal-stripped fetal bovine serum 72hrs prior to the cells seeding. Approximately 100,000 cells/cm² were seeded in the substrates and cells were treated with and without 1nM Estrogen for 24 hrs. To perform the luciferase assay, we used the Luciferase Assay System (E1501, Promega) following the manufacturers' method. Briefly, equal cell quantities were lysate for each culture conditions. A volume of 20μl of cell lysate was mixed with 100μl of Luciferase Assay Reagent and incubated for 60 min at room temperature. Luminescence was measured using an Analytical Monolight 3010 Luminometer.

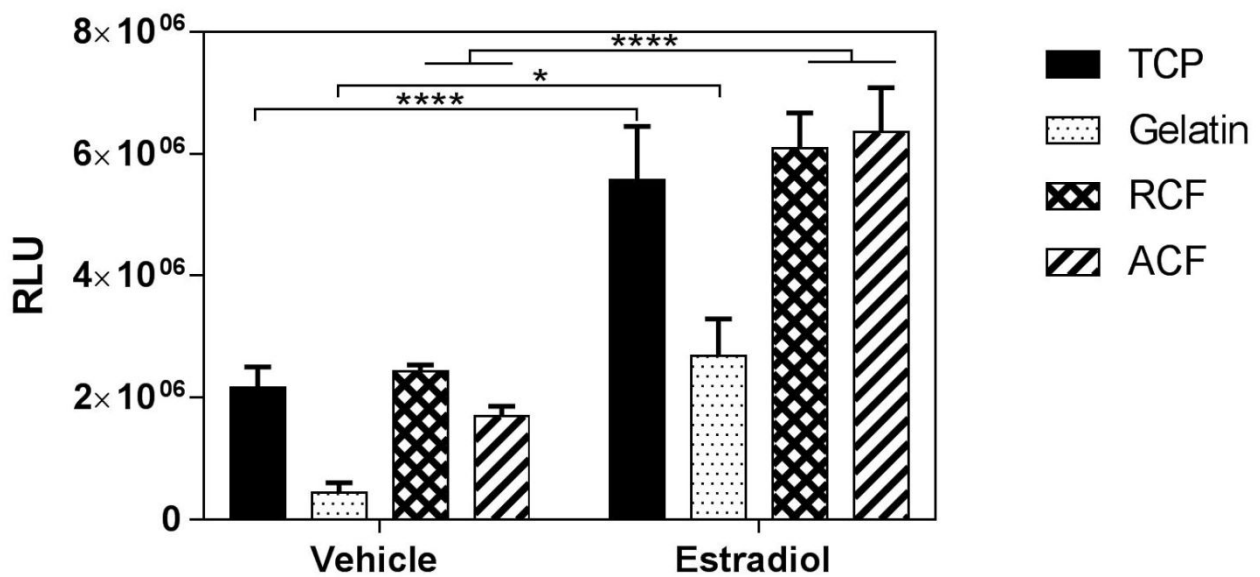


Figure S3-Sn. ER transactivation of MCF-7 MVLN cells. Luminescence expression in different substrates in a hormone restrictive environment used as vehicle and positive control with exogenous estrogen [1nM]. Data represent the means of 3 independent experiments with $n= 3-4 \pm SE$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$, **** $p<0.0001$.

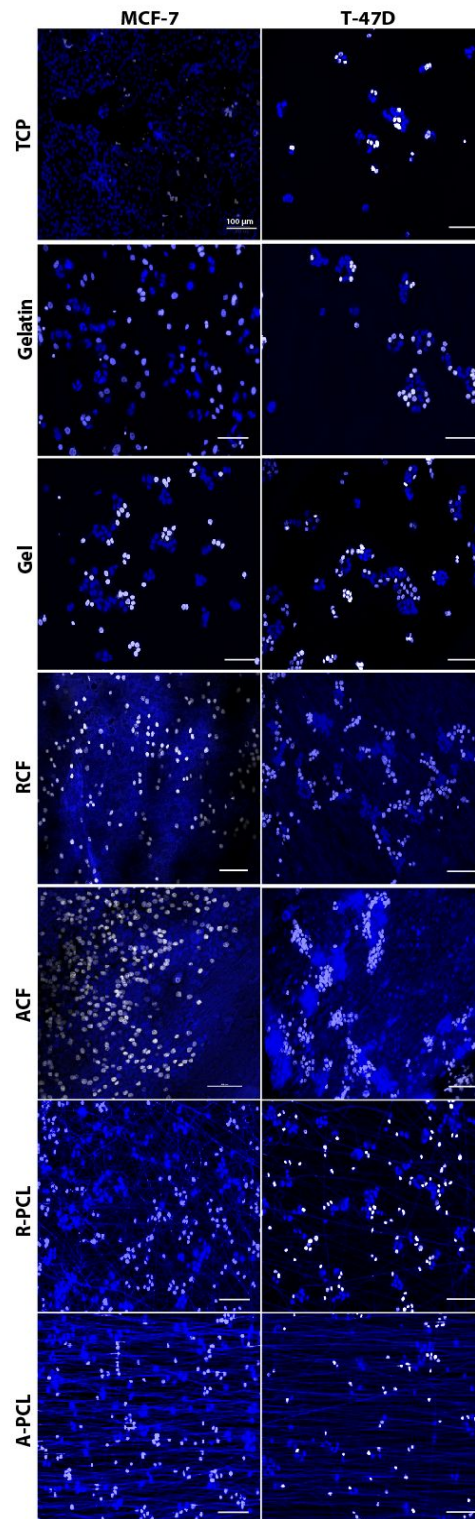


Figure S4-Sn. Representative fluorescent images of MCF-7 and T-47D cells stained with Hoechst and EdU-Alexa 488 to label the nucleus (blue) and cells in S-phase (white) respectively using confocal microscopy. White scale bar represents 100 µm.

T-47D

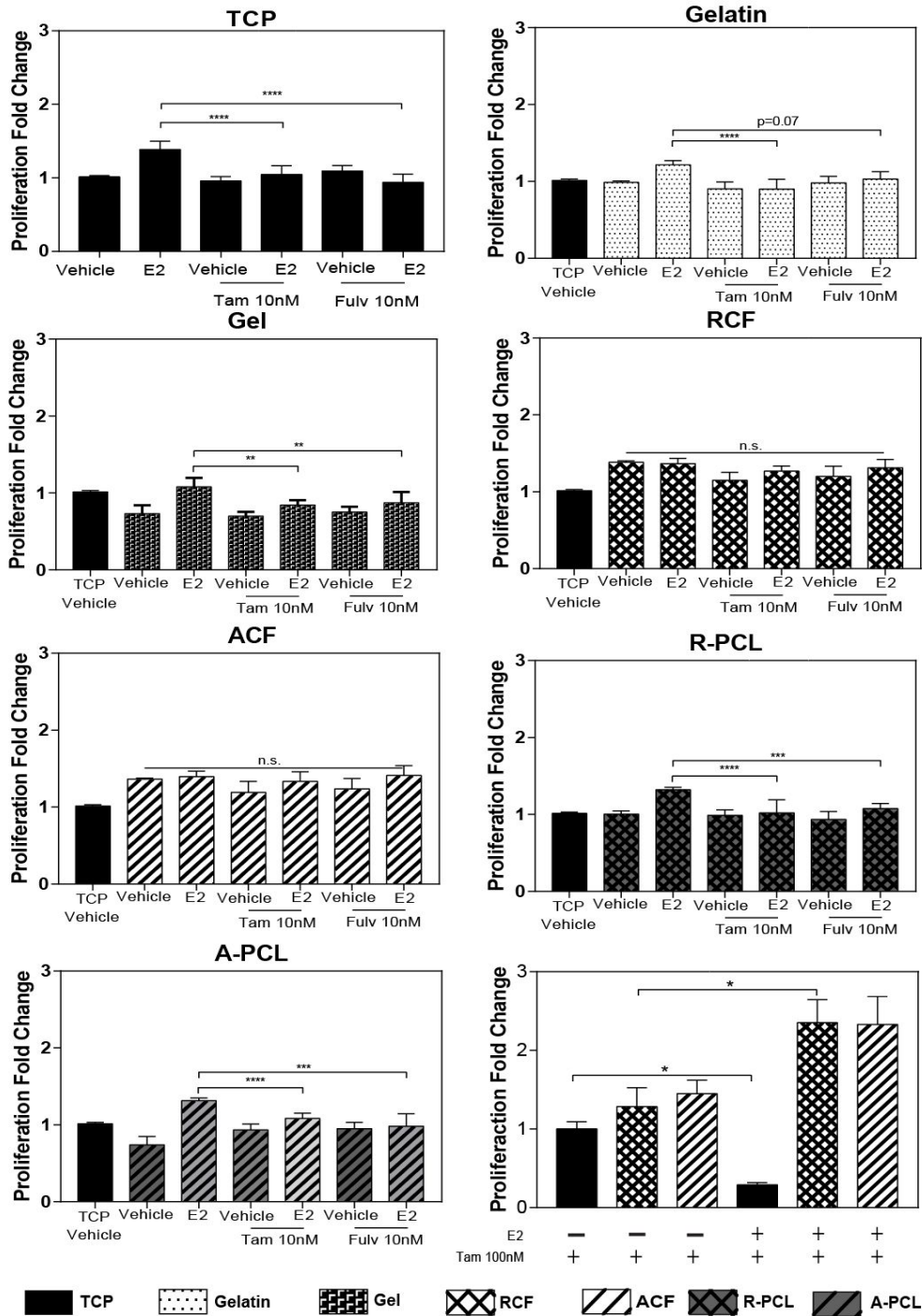


Figure S5-Sn. T-47D sensitivity to ER inhibitors. A-G) Proliferation analysis of the T-47D cells treated with 1 nM of E2 and estrogen receptor signaling inhibitors, 10nM and 100 nM of Tamoxifen and 10nM of Fulvestrant on (A) TCP, (B) Gelatin, (C) Gel, (D) RCF, (E) ACF (F) R-PCL and (G) A-PCL substrates. H) Proliferation analysis of T-47D cells treated with 1nM of E2 and 100 nM of Tamoxifen on TCP, RCF and ACF collagen I substrates. Data represent the average of 4 independent experiments with $n=3-4$, SE, $**p<0.01$, presented as the fold change relative to the TCP substrate without estrogen (vehicle) shown in graph (A).

Table S1-Sn. Secretome profile of 640 human factors of MCF-7 and T-47D cells cultured on different substrates. Concentrations were normalized to total cell counts per condition.

Protein	MCF-7			T-47D		
	Plastic [pg/cell]	Random[pg/cell]	Aligned[pg/cell]	Plastic [pg/cell]	Random[pg/cell]	Aligned[pg/cell]
6Ckine	0	0	0	0	0	0
Axl	0	1.93E-05	0	0.000196462	0.000121924	3.29E-05
BTC	1.90E-05	4.27E-05	0	0	0	0
CCL28	8.30E-05	0.000266113	1.39E-05	8.44E-05	3.04E-05	1. 4.0
CTACK	0	1.05E-05	0	2.52E-05	4.44E-06	7.64E-06
CXCL16	0.010961706	6.58E-07	0.004145842	0.000478942	0.000194835	8.58E-05
ENA-78	0	0	0	1.77E-05	0	3.63E-06
Eotaxin-3	0	0.000318674	0	0	0	6.66E-05
GCP-2	2.16E-06	9.94E-07	1.01E-06	0	0	0
GRO	2.71E-06	4.26E-06	7.81E-06	0.000740713	0.000251974	0.000130775
HCC-1	5.52E-06	1.12E-06	1.26E-07	0	0	4.12E-07
HCC-4	4.12E-06	4.11E-07	5.65E-07	0	1.03E-06	1.51E-06
IL-9	0.000348165	0.000510156	0.000465525	0	0	0
IL-17F	2.00E-05	1.95E-06	5.92E-06	1.24E-05	0	2.28E-05
IL-18 BPa	0	2.44E-05	0	0	0	0
IL-28A	7.06E-07	1.90E-06	8.98E-06	0	0	2.76E-06
IL-29	0	0.000587334	0	0	0	3.94E-05
IL-31	5.13E-07	5.97E-06	6.81E-06	0	0	0
IP-10	2.19E-05	1.77E-05	2.32E-06	7.76E-06	8.57E-06	0
I-TAC	0	2.10E-05	5.12E-06	0.000459269	6.47E-05	7.16E-05
LIF	5.37E-05	1.80E-05	1.99E-05	0	4.33E-05	2.96E-05
LIGHT	0.00015514	1.40E-05	8.51E-05	0	0	0
Lymphotactin	0	0.000101379	0	0	0	0
MCP-2	4.30E-05	5.45E-05	1.10E-05	1.64E-06	0	2.79E-06
MCP-3	1.45E-05	1.78E-05	6.89E-06	4.27E-05	1.22E-05	2.11E-05
MCP-4	2.15E-06	1.64E-06	0	0	0	0
MDC	4.61E-05	4.85E-06	4.07E-05	2.63E-06	0	4.56E-07
MIF	0.008520786	0.007784226	0.007593434	0.001301608	0.001125489	0.001120685
MIP-3a	1.08E-06	1.12E-05	2.91E-06	0.000659299	3.43E-06	6.73E-06
MIP-3b	7.30E-06	7.44E-06	4.19E-06	1.90E-06	2.14E-07	0
MPIF-1	0	0	1.05E-05	0	0	0
MSP	1.16E-05	0.000116286	1.47E-05	0	0	0

NAP-2	1.07E-06	0	3.39E-08	0	7.65E-07	3.98E-07
OPN	0	2.92E-05	0	2.11E-05	1.39E-05	3.47E-05
PARC	4.83E-07	3.12E-06	1.48E-07	0	0	0
PF4	0.000120138	0.000193793	0.000181868	0.000567273	0	0.000701013
SDF-1a	3.73E-06	8.76E-06	4.20E-06	1.38E-05	5.71E-07	4.54E-06
TARC	0	6.59E-06	5.00E-06	2.49E-06	0	0
TECK	0	0	0	8.92E-06	4.29E-05	0
TSLP	0	5.68E-07	0	1.44E-05	1.30E-06	2.77E-06
ADAM8	0.005110566	0.004903411	0.001591621	0.005505589	0.003365682	0.006985099
ADAM12	0.000127227	0.000133495	0	0	0.000148984	5.54E-06
B7-H3	0.011828681	0.002029799	0.004854721	3.83E-05	6.80E-05	5.39E-05
BMPR-1B	0.002340385	0.000880757	0.000201072	6.19E-06	0	3.80E-06
Cadherin-4	0	3.87E-05	0	4.38E-06	1.30E-06	7.15E-06
Cadherin-13	0.000275221	0.000232773	0	0.000450498	0.000405356	0.000496997
CD48	0.000988186	0.000210545	8.73E-05	0	0	0.002054395
CD58	0.000521175	0.000691421	0.000406877	0.000583265	0.000278279	0.000393857
CD84	0.009048062	0.004304371	0.001038796	0	0	0.000327922
CD99	0.001735782	0.000160066	0.000587323	0.000970179	0.000617573	0.000482439
CD155	0.00208413	0.001131045	0.001074767	0.000141568	0.000244227	0.000155622
CD229	0.00148682	0.000812297	0.000952373	8.42E-05	0	0.000192073
CEACAM-5	0.006395449	0.010233411	0	0.001378466	1.00E-04	0
CF XIV	0	0.000155831	0	0.000285692	0.000256851	3.14E-05
Cystatin A	0	0.00026404	8.74E-05	3.42E-06	3.98E-07	0
Cystatin B	0.007151203	0.004946537	0.003384366	0.004199203	0.002685246	0.003041364
Cystatin E M	2.05E-05	0	0	4.38E-06	2.21E-06	0
Desmoglein 2	0	7.11E-06	3.64E-06	5.32E-05	1.06E-07	4.59E-05
DR3	0	1.36E-05	0.000117536	0	0	0.000510103
ErbB4	6.34E-05	7.20E-05	0.000122696	2.99E-05	1.52E-05	1.45E-05
ESAM	4.54E-05	1.85E-05	4.76E-06	0.000498798	0.00040205	0.000320252
FGF-21	0	0	4.18E-06	0	5.76E-06	2.04E-06
Galectin-2	0	0.00036135	0	0	0	0
Galectin-9	0	3.37E-07	0	8.34E-05	5.10E-05	5.01E-05
ICOS	0.000598994	0.000382016	0.000234296	0.000210173	0.000194175	0.000179098
JAM-A	2.86E-05	9.29E-06	0	3.49E-05	0	0
JAM-B	9.50E-05	0.000110024	0.000103499	3.52E-05	3.59E-05	1.07E-05
Kallikrein 5	0.000798476	0.000374498	0.000468211	0.004511509	0.000728994	0.001239156

Midkine	0.253987001	0.00041344	0.125443646	0.000465954	0.00020138	9.74E-05
Pentraxin 3	0	0	0	0.000749668	0.000599827	2.87E-05
Pref-1	0.000767555	0.000271557	0	0	0	0
Siglec-10	0.012651864	0.012288369	0.004633319	0.003680959	0.001894571	0.001046319
SLAM	0	0	0	0	0.000115604	3.07E-06
SP-D	0.000189841	3.16E-05	0	0	0	1.55E-05
Syndecan-4	0.013808231	6.09E-05	0.003213852	2.98E-05	2.56E-05	2.13E-05
Testican 2	0.000411831	0.000387871	0.000484672	4.14E-05	5.51E-05	5.07E-06
TIM-3	0	0	0	0	0	0
TLR4	0	2.47E-05	0	0	0	2.18E-05
TRAIL	3.69E-05	1.04E-05	6.10E-06	0	5.15E-06	1.31E-05
ULBP-1	5.74E-05	0.000294632	0.000411375	0	0	0
ALK-1	0.000214778	0.000142133	0.000143178	0.000740357	0.000146316	0.000660488
B7-H2	0.000220916	3.17E-05	0.0001707	1.26E-05	3.87E-05	2.01E-05
BLAME	0.001420884	0	0.000539501	0.00034976	0	0.000771213
BMP-8	0.00060293	0.000168574	0.000225681	0	0.000113211	0.000136924
CD28	0.001157784	0.000424875	0.000101537	0.00127186	0.000870952	0.000812449
Common beta Chain	0.000816211	0.001318341	0.000138517	0.001807688	0.002091997	0.002835165
Contactin-1	0.000369595	0.000103056	9.80E-05	0.0002453	0.00020199	0.000285186
Desmoglein-1	9.65E-05	7.59E-05	5.43E-05	0.000177805	0.000174183	0.000106255
Desmoglein-3	0.000441037	2.89E-05	0.00022508	0.000400534	0.000367737	0.000822173
EDAR	0.000162142	0.000122289	3.81E-05	2.98E-05	7.99E-05	0.000147055
EphA1	0.001589986	0.000232589	0.00015088	0.00040214	0.000732073	0.000174199
EphB6	0.000363843	1.62E-05	9.27E-06	0	0.000155134	0.000187641
Ephrin-B3	0.007239553	0.001855438	0.0018026	0.015763303	0.009154985	0.009248231
Epiregulin	0.135490667	0.007257528	0.089259534	0.001005278	0.002484546	0.003122875
FGF-12	0.000374727	4.44E-05	0.000150267	0	7.84E-05	8.77E-05
FGF-17	0.006528459	0.002440336	0.002878894	0.000865701	0.000590298	0.000684556
FOLR2	0.000431423	0.000111151	0.000132882	4.79E-05	2.72E-05	3.68E-05
Galectin-8	0.001763484	0.000203471	0.000642213	0.000961644	0.000335519	0.00048649
GHR	0.000159594	2.29E-05	0.000206979	4.76E-05	6.96E-05	7.46E-05
Glypican 1	0.001326034	3.42E-05	0.000822261	0.000636901	0.00048832	0.000229402
Glypican 5	0.003070225	0.000406166	0.001992964	0.000892521	8.02E-05	0.000458725
IFN-gamma R1	0.000129038	7.32E-08	4.25E-05	1.90E-05	1.69E-05	1.29E-05
IL-22 R alpha 1	0.000237988	3.02E-05	0.000124834	5.64E-05	5.56E-05	5.44E-05
IL-22BP	0.003857024	0	0.002651518	0.000791193	0.001239442	0.001608822

IL-23 R	0.000158906	1.84E-05	6.45E-05	0.000132676	0.000103272	0.00016128
IL-31 RA	0.000395806	4.90E-05	0.000178206	0.000352044	0.000197708	0.000161892
IL-7 R alpha	0.000250446	2.41E-05	0.00010016	0.000335304	0.000214894	0.000274427
Integrin alpha 5	0.285109881	0.003636035	0.06561573	0.014029465	0.012278986	0.010459795
MDM2	0.000354532	0.000124745	0.000126835	0.000179331	0.000244067	0.00017532
Nectin-1	0.013896956	0.001566156	0.005057764	0.002427426	0.003953494	0.005739358
NKp30	0.000544898	6.42E-05	0.000165399	0.000379948	0.000472072	0.000310315
Nogo Receptor	0.004665363	0.000615457	0.000684777	0.000720782	0.001582291	0.001856311
Notch-3	0.002212125	6.53E-05	0.001219768	0.000268673	0.000615914	0.000793656
OSM R beta	0.018882219	0.000531502	0.002744773	0.021219249	0.012887312	0.006537596
Prolactin R	0.000610194	6.22E-05	0.000364788	0.000378753	0.000264869	0.0003674
RELT	0.00180182	3.94E-05	0.001153505	0.000339802	0.000237588	0.000149193
Ryk	0.000837095	0	0.000291113	0.000166122	0.000263948	0.000175122
Semaphorin 6D	0.007999148	0.000136461	0.00340537	0.001225917	0.001369039	0
Semaphorin 7A	0.002080393	0.000159059	0.001095855	0.000264224	0.000182328	0.000236858
Siglec-11	0.010475496	0.001369927	0.003979315	0.006882121	0.003931952	0.001237188
B7-2	3.16E-06	0	4.72E-05	0	0	0
BAFF R	5.81E-06	0	1.01E-05	1.74E-05	3.59E-05	1.45E-06
Calcitonin	0.011768467	0.000485162	0.004565063	0.029027086	0.002302538	0.018087277
Calsyntenin-1	0.00024169	0	0.000183143	0.001601385	0.001306462	0.00147904
Cathepsin E	4.06E-06	0	1.17E-05	0.0034933	0.002351861	0.000797254
cIAP-2	6.55E-05	0	0	0.000305192	1.55E-05	0
CF VII	0.002074006	0	0	0.000994933	0	0.001083308
cMASP3	0.000514774	0	0.001268089	0.000553619	0.000548896	0.000108142
Endocan	4.85E-05	7.66E-06	0	0.000100875	2.42E-05	4.59E-05
EphA2	8.60E-05	2.96E-05	8.30E-06	0.003535818	0.001395714	0.001800851
EphB4	0.008930413	0.000360924	0.002427367	7.10E-05	4.88E-05	5.99E-05
Ephrin-A4	0	0.000201667	0	0	0	0
FGF-23	0	0	0	6.98E-05	7.87E-05	0.000114993
FGF-5	0.000606614	0.00057134	0.000591012	0.001104809	0.000559966	0.000394883
Flt-3	2.00E-06	3.76E-05	0	5.19E-05	3.40E-05	1.21E-05
GLP-1	7.93E-05	6.83E-05	7.50E-05	7.64E-05	0	0.000105938
Glypican 2	0.002009226	0.001900219	0.000522336	0.000564599	0.001381628	0
GM-CSF Ra	0.001780939	0.001475581	0.001852007	0.00527426	0.002636127	0.002815011
GP73	4.59E-05	0	9.75E-05	0.000981226	0.000383186	0.000406164
HTRA2	0.000453464	0.002966173	0.000244059	0.006493012	0.004883757	0.004937045

IL-20 Ra	0	0	0.001790131	0.010408577	0.006734025	0.010883953
IL-4 Ra	2.99E-05	1.65E-05	3.92E-05	0.000165752	0.000124661	7.47E-05
JAM-C	0.00027698	3.39E-05	6.04E-05	0.000282367	0.000205726	0.000207803
LH	0	0.000506799	4.94E-05	0.000419905	0.000116441	0.000428312
Matrilin-3	0.00044201	0	0.000189078	0.000112867	8.51E-05	3.36E-05
MeprinA	0.003430952	0	0	0.008195337	0.007206062	0.005703125
MSP R	0.000190095	0	0	9.29E-05	9.83E-06	0
N-Cadherin	0.005669382	0.000979371	0.00060942	0.000467616	0.000127273	0.00011849
Neprilysin-2	0	0.001091107	0.002501429	0.002854959	0.00735922	0.001012344
NKp44	0	0	0	0.000136431	9.02E-05	0
PAPP-A	0.006382193	0.001491692	0	0.008020601	0.003409347	0.003857726
Pepsinogen II	0	0	0	0.000614586	0.000374426	0.000437867
Presenilin 1	5.84E-05	0	0	1.96E-05	0	7.39E-06
PTH	9.97E-06	0	0	0	2.41E-05	0
PYY	0.004850003	0.002516645	0.002100454	0.002530055	0.00135829	0.002365016
SOX2	0	0	0	0.004112138	0.004534456	0.002130288
TFF3	0.005147914	0	0.022362996	0	0.000769545	0.000317051
TFPI-2	8.23E-06	0	0	0.002513231	0.002240559	0.000582841
TRACP	0.000671546	5.90E-05	0.000164943	0.001206077	0.001423076	0.001085515
Ubiquitin+1	0.001869162	0	0.000676942	0.000671246	0.000282953	3.69E-05
ACE	0.00331703	0.000630545	0.000841105	0.000506885	0.000150072	0
Activin RIB	0.002311822	0.000783864	0.000448978	0.000194951	0.000303113	0
ADAM23	0.01530055	0.004206831	0.002784287	0.000784157	0.000183197	0.000568094
Artemin	5.45E-05	0	0	0.000319855	0	0.000646867
Cardiotrophin-1	0.006238373	0.003344436	0.006572889	0.000322547	0.000271739	0.000238665
Cathepsin V	0.001640682	9.70E-05	0.003182107	0.00080108	0.000431634	0.000683469
FABP1	0.044893568	0	0.052309379	0.00190818	0.002558197	0.004114333
FGF-20	0	0	0.000906503	0.001124138	0.000403651	0.00092492
GDF-8	0.002695021	0.000558071	0.001456985	0.008099959	0.001049107	0.006989435
HAI-1	0.006626054	0.002671755	0.001959316	0.000391276	0.000327195	0.000556826
IL-27 Ra	0.004718196	0.000101066	0.002361056	0	0.000389856	0.000364154
Insulin R	0.010171644	0.002370277	0.003409042	0.004034113	0.0007706	0.00334355
Kallikrein 7	0.001024813	9.53E-05	0.000514352	1.29E-05	5.42E-06	5.83E-06
LIF R alpha	0.000302611	8.53E-05	0.000115142	1.00E-04	7.23E-05	4.90E-05
Lipocalin-1	2.35E-05	5.37E-06	1.16E-05	0.000743399	0.000158523	0.000120555
LTbR	6.19E-05	4.50E-06	2.05E-05	2.99E-05	9.37E-06	2.49E-05

Mesothelin	0.000994453	0.000331557	0.000452326	0.000118756	0.000154101	0.000155058
MFRP	2.65E-05	0	0.000361665	0.000821764	0.000491825	0.000524608
Neuropilin-2	0.001047709	9.83E-05	0.000260405	0	4.08E-05	5.76E-05
Neurturin	0.000227571	7.36E-05	9.80E-05	0.000137494	0.000219479	0.00014077
Nidogen-2	0.000136695	0	0	9.02E-05	0.000255863	0.000333509
Olfactomedin-2	0.006522537	2.61E-05	0.00212283	6.64E-05	0.000905793	0.000387019
p53	0.002407725	0.000666049	0.001117705	0.002292616	0.001610712	0.002478062
PD-ECGF	0.005899773	0	0.000443153	9.36E-05	0.00082361	0.000871416
PDGF-CC	0.001095728	0	0.000267847	0.0011819	0.000836252	9.44E-05
Progranulin	0.042712281	0.000343223	0.01782209	0.023543932	0.01738024	0.008857363
Ret	0.004551708	0	0.00330051	0.005519341	0.002492772	0.002705526
ROBO4	0.000991049	0.000312063	0.000234247	0	0	0
Semaphorin 6B	0	0	0.000518854	0.000807	0.000741742	0.000844937
Serpin F1	0.003874854	0.000187827	0.001239483	0.001200257	0.000965283	0.000299543
SREC-I	0.000130175	0	0	0.001273277	0.000364571	0.0002851
SREC-II	0	0	0.000930862	0.000537224	0.000598342	0.000164561
TLR1	0.000483866	2.08E-05	0.000128497	0.000223801	0.000132067	7.96E-05
TLR3	0.000297263	7.07E-05	7.47E-05	0.000231093	0.000283239	8.69E-05
TPP1	0.005458561	0.000306402	0.001605673	0.001712322	0.00177723	0.000920207
TREM-2	0.000131788	1.25E-05	6.33E-06	1.21E-05	4.73E-05	7.27E-05
TrkC	0.000413905	7.39E-05	7.64E-05	0.000110369	3.20E-05	7.35E-05
TROY	0.000194767	0	0	0.000317805	0	0.000130898
Uromodulin	0.000160246	3.94E-05	5.84E-05	0.000108379	0.000121128	0.000218289
XIAP	0.004451642	0.005456913	0.004342653	0.000755525	0.000506843	0.000365552
4-1BB Ligand	0.000440636	0	0	0	0	0.000322495
Activin R1IB	0.000146787	1.86E-05	2.94E-05	2.90E-05	0.000112318	0.000191584
Aminopeptidase P2	7.38E-05	0.000437318	0	0.001603761	0.000943503	0.001440867
BAMBI	0.000512917	1.15E-05	0.000303658	0.000468507	5.23E-05	0.00032688
BOC	5.91E-05	8.66E-05	0	0	0	0
Brevican	2.34E-05	1.03E-05	2.00E-05	3.12E-05	2.48E-05	4.53E-05
Carbonic Anhydrase XII	0.01057601	0.001007742	0.006251667	0.001589853	4.90E-05	0.002306936
Carboxypeptidase A2	4.09E-05	9.87E-06	3.12E-05	0	3.31E-06	0
CD300c	0	0	0	2.17E-05	2.08E-06	7.17E-05
CD320	0	0.000228447	0.000293575	0.000858116	0.000206716	0.00059997
CDNF	0	1.24E-06	1.44E-06	1.06E-05	1.80E-05	2.46E-05
CDO	0.000290709	4.52E-05	0.000313013	4.24E-05	0	2.53E-05

CHST1	0	7.56E-06	4.75E-05	0.000143353	1.84E-05	0.000131855
CHST4	0	0	0	0.000622974	0.00052114	0.000851974
CILP-1	0	0	0	6.49E-05	0	0.000135477
CNTF R alpha	0	0	0	2.13E-05	0	5.05E-05
CRIM1	0.00054323	1.72E-05	0.000271579	0.002933523	0.001936281	0.001048906
CRTAC1	0	0.000231822	0.000109135	0	0.000193607	0.000463766
CXADR	8.76E-05	4.26E-05	5.22E-05	0.000498716	0.000193823	0.000351833
Dopa Decarboxylase	9.56E-06	1.59E-06	3.75E-06	6.38E-06	4.34E-06	7.92E-06
DPPH	0.028516732	0.004338152	0.012925746	0.004737805	0.005584695	0.004215769
DSPG3	6.28E-05	3.07E-05	5.53E-05	0	7.65E-05	0.000203505
EMR2	2.80E-06	1.77E-06	1.15E-06	8.54E-05	5.60E-05	3.48E-05
FCAR	0	9.70E-06	0.00019875	0.000883288	0.000747937	0.00063309
FCRL1	0.000519385	0.000323493	0.000186982	0.000746396	0.000768568	0.001094684
FCRL2	0	8.18E-05	0	0.000111144	0.000150772	0.000126588
Gas6	5.32E-06	1.09E-06	8.01E-06	3.39E-06	2.03E-05	2.54E-05
GPR56	0.000399028	2.56E-05	0.000102865	6.64E-05	1.15E-05	1.92E-05
GPVI	0	0	0	1.62E-05	2.05E-05	2.92E-05
Hepsin	0	0	2.52E-06	6.83E-05	0.000115314	0.00013079
ILT2	0	0	2.62E-07	3.46E-06	2.22E-06	3.03E-06
Jagged 2	0	0	0	0.004637047	0.00392219	0.003851073
Kirrel3	0	0	0	0.000219874	0.000207682	0.000246036
KLF4	0.001332149	0	0	0.000908797	0.00064963	0.001122793
LAIR1	5.84E-05	0.00025419	1.05E-05	0.002754666	0.000709288	0.001627327
LAMP	0	1.45E-07	0	0.000343835	0.000159419	0.000303414
LAMP1	0.000441965	0.000123685	0.000331874	0.004963268	0.004443672	0.004792665
MDGA1	0	0.000143637	0	0.000250836	0.00037744	8.45E-05
MIS RII	0	1.31E-05	0	0.000166465	0	0.000138703
Neurexin 3 beta	0	0	0	0	0	1.78E-05
AMIGO	0.00199253	0.000764782	0.000984187	0	0	0
Aminopeptidase LRAP	0.058982739	0.0664978	0.030684104	0.022344202	0.020351308	0.01537439
Amnionless	0.002366138	0.000733175	0.00051387	0	0	0
Arylsulfatase A	0.012618276	0.011447026	0.007656005	0.010036693	0	0.005864331
Bcl-w	8.14E-05	6.86E-06	5.92E-06	0	1.29E-05	9.04E-06
CD109	0.045581214	0.326175939	0.025471804	0.011065096	0	0.006939828
CD157	1.57E-06	1.23E-06	5.18E-08	8.33E-07	0	2.28E-06
CD34	0.000212101	6.67E-05	5.81E-05	0.000124754	6.24E-05	0.000129756

CD83	0	3.71E-06	0	4.83E-05	0.000267645	0.001200701
CLEC-1	0.003911134	0.011670163	0.005273737	8.79E-05	0	0
CLEC10A	0	4.16E-06	9.03E-07	0.000192795	0.000770506	0.000640522
CMG-2	0.000110751	0.000335886	0.000201242	0.001540138	0.000210925	0.001101465
CREG	0.001356565	0.006478708	0.002420925	0.001108411	2.94E-05	0.000248292
Cystatin SN	4.23E-05	0	0	0.00019571	7.02E-05	0.000105483
Cytokeratin-8	0.000981414	0.006302003	0.002144196	0	0	0.000175609
Dectin-1	0.000177492	0.000371831	4.44E-05	0.000140668	0	0.000129857
Desmocollin-3	0.000196561	7.61E-05	0.000265161	0	0.000502986	0.000445552
Endoglycan	0.007935364	0.018048081	0.011207955	0	0	0.036735293
Galectin-4	0.0001397	1.74E-05	5.86E-05	0	0	2.12E-06
HAPLN1	0.003270107	0.001364325	0.002293584	0	0	0.00131624
Jagged 1	0.006792496	0.001104375	0.000618207	0	0	0
Langerin	0.004608986	2.10E-05	0.001438192	0	0	0.001058635
Lumican	0.000592523	2.63E-05	0.000222784	0	0	0.000104895
Matriptase	0.00168132	0.000407076	0.000704808	0.003299024	0.003498718	0.002861017
MEP1B	0.001065089	0.001639074	0.000581275	0	0	0
Nectin-3	9.18E-06	0	0	4.14E-05	3.73E-05	0.000122184
OX40	0.001443996	0.000309303	0.000868776	0.000131239	0	8.53E-05
OX40 Ligand	0.000973919	0.00064252	0.00059599	0	0	0
p27	0.002978483	0.00180574	0.002334405	0.001705417	0	0.000948924
Pappalysin-2	0.000730773	0.00020401	0.000488643	0.000114066	0.00010825	0.000121999
Plexin B3	0.000669283	2.54E-05	0.000285452	4.70E-05	0	1.64E-05
Plexin D1	0.003967625	0.000618566	0.00166989	0	0.000593457	0.000853697
proGRP	0.001152643	0.00035341	0.000465966	0.000109265	0	0.001834846
PSA-total	3.54E-06	2.11E-06	3.19E-06	0	0	3.91E-07
Reg1B	0.00139632	0.000988625	0.000716462	0.000261802	0	0.000434108
RGM-A	0.000705714	0.000238986	0.000459863	0	0	0.000183832
ROBO2	0.002450644	0.000193208	0.000533674	0	0	0.001449696
Spinesin	0.000167208	0	0.000147434	0	0	0.000736614
TWEAK R	0.000680918	1.20E-05	0.000254101	0	0	0.000393326
ULBP-3	2.95E-05	4.58E-06	1.73E-05	2.51E-05	3.49E-05	4.14E-05
Activin A	0.003959308	0	0.001882796	2.11E-05	0	0
AgRP	0.000144672	0	7.80E-05	0	0	2.30E-06
Angiogenin	0.001201763	1.95E-07	0.000881567	0.000129281	2.09E-05	2.34E-05
ANG-1	0	0	0	0.000147924	0	5.03E-05

Angiostatin	0.003107468	0	0.000869268	6.99E-05	0	0
Cathepsin S	9.21E-06	0	0	0.001446444	0.001107729	0.000691487
CD40	1.80E-05	1.87E-07	0	0.000101266	3.95E-05	5.80E-05
Cripto-1	1.83E-05	2.10E-05	3.85E-05	4.43E-06	2.47E-08	0
DAN	0	7.16E-05	0	0	1.24E-07	0
DKK-1	0.045610683	0	0.035828093	0.005519716	0.003110368	0.001515244
E-Cadherin	3.61E-05	0.000169251	5.86E-05	0.000101384	0	0
EpCAM	0.000779346	1.77E-05	0.000233901	6.93E-05	5.23E-05	4.79E-05
FAS L	1.54E-05	4.84E-06	4.16E-06	2.82E-06	0	8.70E-06
Fcg RIIBC	1.59E-05	0.000105819	0.000175655	1.55E-05	1.38E-05	7.71E-06
Follistatin	0.001878576	0	0.000455644	0.060608272	0.050977465	0.020113394
Galectin-7	3.71E-05	0	0	3.26E-05	0	0.000123611
ICAM-2	0	0	1.33E-06	0.000106841	0.000155318	0.000144131
IL-13 R1	4.97E-05	0.000121346	0.00094792	0.000641319	0	0.000310173
IL-13 R2	0.000345458	0	3.67E-05	0.002278861	0	0.000783169
IL-17B	0	4.90E-06	0	0.000441892	8.73E-05	0.000162874
IL-2 Ra	5.97E-05	0	7.09E-05	6.54E-06	0	4.02E-06
IL-2 Rb	8.34E-05	0	0.000374649	0.00055599	0.000379276	0.000239276
IL-23	0.000761543	5.75E-05	0.000429111	0	1.71E-06	1.03E-05
LAP(TGFb1)	0.003580827	2.91E-05	0.001563004	0.000359869	0.000201466	9.54E-05
NrCAM	9.25E-05	0	1.52E-05	7.98E-05	0	5.17E-05
PAI-1	0.000633374	0	0.001573011	0.018002681	0.011742311	0.009114091
PDGF-AB	0.001193743	0	0.000504093	0	0	2.05E-06
Resistin	0	0	2.13E-05	2.08E-05	4.83E-06	9.55E-06
SDF-1b	0	0	0	1.28E-05	0	3.88E-06
gp130	0.002702158	0	0.002393394	0.005405102	0.002337939	0.002770696
Shh-N	0	0	0	0.000246646	0.000164988	9.74E-05
Siglec-5	7.90E-05	0	1.55E-05	5.38E-05	2.94E-05	4.20E-05
IL-1 R4	0.000295428	0	0.000314339	0	0	0.000168095
TGFb2	0.000113122	0	7.14E-05	0.000128003	0.000113103	0.00017972
Tie-2	0.000119991	1.93E-05	0	0	0	0
TPO	0.000110552	0	0	8.65E-05	0.000101541	0.000118099
TRAIL R4	0	1.37E-05	2.18E-05	0	0	0
TREM-1	0.000492812	5.26E-06	0.000161096	5.78E-05	0	1.46E-05
VEGF-C	0	0	0	3.06E-05	0	2.07E-06
VEGF R1	0.000982267	0.000164287	0.000521876	0	0	0

Adiponectin	0.001782727	0.000894212	0.000349178	0.007807455	0	0.002930697
Adipsin	0.000279777	0.000139172	0.000116189	7.83E-05	9.14E-06	3.80E-05
AFP	0	0	0	0.00048655	0	0.000144335
ANGPTL4	2.70E-05	0	9.65E-05	0.001807874	0.002484855	0.001430236
B2M	0.009888348	0.000109233	0.006083269	0.001988132	0.001037924	0.000971335
BCAM	0.00355759	0	0.000737669	0.002009739	0.00016558	0.001573434
CA125	0.002455814	0	0.000402684	0.00237069	0.001626926	0.001360892
CA15-3	0.001387147	6.58E-05	0.000700694	0.004716462	0.001813549	0.001776321
CEA	0.001099994	0	0.000130354	0.00027228	0.000121521	0.000277814
CRP	5.47E-06	0	0	0	0	0
ErbB2	3.99E-05	1.66E-05	0	1.29E-05	0	0
Ferritin	0.001750797	0	0	4.629632002	4.218820005	3.279455816
FSH	9.84E-05	0	0	0.001061526	0	0.000497342
GROa	0.000706365	0	0	1.019640008	0.335370225	0.138212246
hCGb	8.97E-05	3.18E-05	0	0.000173394	0	6.42E-06
IGF-1R	0	0	0	0	0	0
IL-1 RII	0.000238388	5.15E-05	0	0.000142566	0	4.35E-05
IL-3	0	0	0	0.000132529	0	5.68E-05
IL-18 Rb	0	0	0	2.36E-05	0	1.06E-05
IL-21	0	0.000633883	0	0.000918451	0.000903013	0.000634501
Leptin	0.000200208	0	9.21E-05	0.00053327	0.00048851	0.000309406
MMP-1	1.05E-05	5.80E-05	5.60E-06	0.058345495	0.063405811	0.033811649
MMP-2	0.000313215	0.000110204	0	0.000100216	2.71E-05	3.21E-05
MMP-3	2.47E-05	0	0	0.000218787	0.005211708	0.000503467
MMP-8	4.53E-05	2.48E-05	0	0.000314296	6.74E-05	0
MMP-9	0	0	0	9.27E-05	1.31E-05	1.72E-05
MMP-10	3.23E-06	1.04E-05	3.89E-06	0.001055459	0.003704915	0.00283058
MMP-13	1.43E-05	0	0	0.001746666	0.002561545	0.001670852
NCAM-1	0.000292477	0	0	0.001518581	0.004474815	0.002652071
Nidogen-1	0	0	0	0.00270032	0.001019266	0.000728028
NSE	0.00049011	0.000366197	0.000340144	0.02327911	0.024617863	0.019654303
OSM	0	0	1.32E-05	0	0	0
Procalcitonin	0.002777709	0.001541367	0.000824241	0.00032429	1.27E-05	9.62E-05
Prolactin	0.000823739	0.000487052	0	0.003191623	0.000578148	0.000173807
PSA-free	0	0	0	2.64E-05	2.40E-05	9.96E-06
Siglec-9	2.53E-07	0	0	0.000158737	0	0

TACE	0.000287447	0	0.000394499	0.001563603	0.001141773	0.000850954
Thyroglobulin	0	0	0	0.157974169	0.241828746	0.103103757
TIMP-4	4.12E-06	3.59E-06	2.90E-06	8.18E-05	2.27E-06	6.41E-06
TSH	0	0	0	0.000247409	6.41E-05	0.000102889
2B4	0	0	0	0.002784344	0.001608949	0.001520321
ADAM9	2.77E-05	0	0	0.00057444	0.000374425	0.000271099
ANG-2	2.99E-05	0	0	0	0	0
APRIL	7.38E-05	0	0	0	0	0
BMP-2	0	0	0	8.15E-05	0	0.000146068
BMP-9	0	0	0	0	0	0
C5a	1.24E-05	0	7.06E-06	0.000126578	2.33E-05	4.30E-05
Cathepsin L	8.55E-05	0	1.12E-05	0.000429662	0.000360011	0.000258271
CD200	1.05E-05	0	0	0	0	0
CD97	0	0	0	0.00613346	0.001842767	0.001783398
Chemerin	0	7.92E-05	0	7.89E-05	0	0
DcR3	1.85E-05	0.000206629	0	0	0	0
FABP2	0	7.96E-06	0	0	0	0
FAP	0	1.36E-05	0	3.04E-05	1.72E-05	0
FGF-19	0	0.000226698	0	9.55E-06	0	0
Galectin-3	0.011429003	0.011492396	0.005259039	0.002145145	0.001306518	0.001216908
HGF R	0	1.81E-06	9.66E-06	0.000309437	0.000270366	9.63E-05
IFNab R2	0	0	0	0	0	0
IGF-2	0	0	0	0.005179792	0	0
IGF-2R	0	0	0	0.002929588	0.000853077	0.001081293
IL-1 R6	0.000394045	0	0	0	0	0
IL-24	0	0	0	1.25E-05	0	0
IL-33	3.27E-06	0	0	0	0	0
Kallikrein 14	3.76E-06	0	0	3.38E-05	1.57E-05	9.61E-06
Legumain	0.004032861	6.81E-05	0.001298922	0.012196286	0.010387856	0.005050046
LOX-1	2.42E-06	0	3.71E-06	7.15E-06	8.67E-07	2.07E-06
MBL	7.31E-07	0	1.20E-07	0	0	0
Neprilysin	0	0	0	0	0	0
Notch-1	0.000105952	6.41E-06	0	7.15E-06	0	0
NOV	0	2.62E-05	0	0.002442649	0.002031153	0.000864675
Osteoactivin	3.16E-07	2.97E-05	1.18E-05	0.000734235	0.000332079	0.000291659
PD-1	4.60E-05	3.26E-05	1.77E-05	1.27E-05	0	0

PGRP-S	1.11E-06	6.52E-07	0	0	0	0
Serpin A4	0.000231728	0.00012343	5.18E-05	0.00016913	3.42E-05	1.80E-05
sFRP-3	0	4.10E-05	7.84E-05	0	0	0
Thrombomodulin	5.41E-05	2.75E-05	0.000214688	0.000338776	0.000512365	0
TLR2	6.67E-05	5.20E-05	2.22E-05	0	0	0
TRAIL R1	2.72E-06	0	0	0	5.82E-05	0
Transferrin	0.018360541	1.12E-05	1.33E-05	0.000711822	0.001036633	0
WIF-1	0.000325093	6.09E-05	0.000211501	1.27E-05	0	0
ACE-2	0	0	0	0.073631105	0	0.052998401
Albumin	0.00778894	0.000269114	0	0.000808831	0.002180922	0
AMICA	0	0	0	0.000810248	0.000571533	0.000845506
ANG-4	0	4.18E-05	0	0.001572274	0.000301362	0.00011876
BAFF	0	0	0	5.47E-05	1.53E-05	8.48E-06
CA19-9	0.003617787	0.003197029	0.002885509	0.001182469	0.000493692	0.000800414
CD163	0	0	0	0.000141686	5.31E-05	3.07E-05
Clusterin	0.022212604	0	0.012871108	0.000314812	0.000233362	0.000130811
CRTAM	0	0	0	2.59E-05	7.84E-05	8.79E-05
CXCL14	0.009904579	0.000495612	0.005741473	0.000355057	0.000146421	0.000136745
Cystatin C	0.035778199	0	0.019976659	0.002488276	0.002862301	0.000937887
Decorin	6.12E-06	0	0	3.07E-06	8.12E-06	9.51E-06
Dkk-3	0	0	0	3.82E-07	0	0
DLL1	0.00013907	1.71E-05	0	0	0.000485762	0.000454071
Fetuin A	0.00299211	0.002130527	0	0.00530259	0	0.003424329
aFGF	0.000838838	0.000952604	0.004713428	0.030846547	0.02105281	0.049331354
FOLR1	0	0	0	0.000241737	0.000146782	9.52E-05
Furin	0.011179859	0.000497059	0	0.000539503	0.000531038	4.69E-05
GASP-1	0	0	0	0.00013344	0.000163395	0.000262958
GASP-2	0	0	0	9.88E-05	3.69E-05	3.05E-05
G-CSF R	0	0	0	0	0	0
HAI-2	0.009798021	1.38E-05	0.005987716	0.003561417	0.001571826	0.000541432
IL-17B R	0	0.00101103	0	0.00148263	0.000577768	0.000378903
IL-27	1.86E-05	0	7.62E-06	7.90E-05	6.47E-05	6.30E-05
LAG-3	0	0	0	0	0	2.59E-05
LDL R	0.000651326	2.00E-06	0.000494704	0.000276563	0.00028293	8.80E-05
Pepsinogen I	4.23E-05	1.07E-05	1.29E-05	3.59E-06	2.65E-06	5.81E-06
RANK	0	0	0	0.000184985	2.64E-05	8.12E-05

RBP4	8.15E-05	3.15E-07	0	2.20E-05	0.000115374	0
SOST	0	0	0	1.38E-05	0	0
Syndecan-1	0.003744759	0	0.001119426	0.00065832	0.000242542	0.000133602
TACI	0	0.000678581	0.000185487	0.000997995	0	0.000285925
TFPI	0.00346966	0	0.000226001	0.002016915	0.000764216	0.000452115
TSP-1	0.110301963	0.00082934	0.0610875	0.045841868	0.031058356	0.021862732
TRAIL R2	9.92E-07	0	0	2.42E-06	6.10E-06	2.07E-06
TRANCE	0	0	0	0.01067603	0.001387601	0.001391079
Troponin I	4.20E-05	1.29E-05	0	0	0	0
uPA	0	3.45E-06	0	0.001409484	0.000584554	0.00040156
VE-Cadherin	0.019143729	0.001369865	0.003286062	0.001056223	0	2.61E-05
WISP-1	0	0	0	0.00331976	0.000885959	0.000969595
ANGPTL3	0.006891579	0.001102284	0.000541599	8.32E-05	1.03E-05	2.13E-05
bIG-H3	0.004166892	0.000638745	0.001487856	0.007013254	0.002696112	0.001028284
CA9	0.001435615	0.000924088	0.00140243	0	0	0
Cathepsin B	0.001681944	0	0	0.000484511	0.001066104	0.000132432
CD23	0.001575506	0.001221179	0.001169005	7.14E-06	0	0
CHI3L1	0.000909074	0.000578518	0.00029173	0.000873196	0.000329988	0.000163557
CTLA4	0.000540612	0.007085799	0	8.27E-05	0	9.01E-05
Dkk-4	0.000595943	0.00239353	0	0.002479823	0.000508842	0.002311102
DPPIV	0.000851109	0.000869909	0.000374494	0.00141747	0.0004624	0.000528184
EDA-A2	0.001092519	0.003161159	0	0	6.17E-06	0
Epo R	0.00033256	0.000491597	0	0	0	2.90E-06
FGF-6	0	0.000506456	0	0.000237491	0	6.84E-05
FGF-9	0	0.002610557	0	0	8.30E-06	0
Gas 1	0	0.00011804	0	2.43E-05	2.88E-05	1.08E-05
IGFBP-5	0.003081159	0.005221513	0	0	0	0
IL-1 F5	5.18E-06	0.007573985	0	0	0	0
IL-1 F6	0	0.003980955	0	0	0	0.00031326
IL-1 F7	0.002168528	0.002152591	0.001909852	0.001261756	0.000335654	0
IL-1 F8	7.56E-05	2.88E-05	3.75E-05	2.52E-06	0	0
IL-1 F9	0	0.009084126	0	0	0.000952269	0
IL-1 F10	0.039990961	0	0.002013164	0.008789499	0	0.00439249
IL-1 R5	0.000486926	3.58E-05	3.30E-05	6.71E-05	0	3.27E-05
IL-17C	0	6.96E-05	0	3.43E-05	6.30E-05	3.12E-05
IL-18	0.000658225	0	0.000862767	0.000490291	0.000552531	0.001493465

IL-20	0.000471333	0.000171125	0	0	0	0
IL-34	2.75E-05	9.10E-05	1.24E-05	0.000134887	6.96E-05	9.47E-05
IL-5 Ra	0.005459321	0.004865482	0.002127054	0.002521183	0	0.002210827
IL-10 Ra	0	0	0	0.006412606	0	0.003065107
Layilin	0.002615824	3.09E-05	0.000222416	9.26E-05	1.47E-05	5.87E-05
Leptin R	0	0	0.007932146	0	0.000233816	0
Marapsin	0	0	0	9.42E-05	0	2.18E-06
Mer	0.000262656	0.000274764	0	0	0	0
MMP-7	0.000225989	0.000302332	0.000895543	0	6.66E-05	0.00019326
P-Cadherin	0.002322747	0.000128082	0.001033162	0.002575683	0.001139733	0.000712124
Prostasin	0.00020527	0	0	9.88E-05	0	0.000113537
PSMA	0.130174089	0	0.019704984	0.001220284	0	0.001048651
SIGIRR	0.003307386	0.000307165	0.000705745	0.002181547	0.000898324	0.001468504
TGFb RIII	0.006011761	0.001203504	0	0.000372785	7.74E-05	1.92E-05
TF	4.93E-06	0	2.30E-05	0.000658953	0.000648683	0.000480656
TWEAK	0.001703009	0.002874718	0.002060775	0.000121556	2.83E-05	0
ADAMTS13	0.003537097	0.00468791	0.005893989	0	0	0
Aggrecan	0.000274847	0.0001028	0.00037302	0	6.68E-05	1.94E-05
Angiotensinogen	0.006352894	0.004048718	0.004901466	0.002680974	0.000257424	0.004070437
B7-H1	0.000143113	0.00014476	0.000191749	0	0	0
BMPR-IA	0.003101384	0.002905451	0.004216167	0	0.00026829	6.01E-05
BMPR-II	0.01163218	0.005735094	0.008597741	0	0	0
Cadherin-11	5.64E-05	7.89E-05	9.49E-05	0.001587325	0	0.001908003
CD27	6.63E-05	2.79E-05	0.000159647	0	0	0
CD6	0.029365695	0.012943908	0.021769463	0.008687641	0.005330973	0.006316406
Ck beta 8-1	0.00207113	0.003076889	0.002365791	0	0.000122926	0
CNTF	4.16E-05	0	0.000302318	0.037617034	0.042020945	0.016807195
DNAM-1	0.000395073	0.000627875	0.000492596	0.000313485	0.000604263	0
EMMPRIN	0.001162493	0.000306554	0.000609595	0.000585648	0.00052823	0.000503159
FLRG	0.001036503	4.21E-05	0.000684139	9.98E-05	0	0
Follistatin-like 1	0.000593359	0.000401781	0.000516308	0	0.000505061	0
Fractalkine	0.001914538	0.001687211	0.002066383	0.002085581	0.004289379	0.004248438
Galectin-1	0.003039908	0.002609911	0.001995908	0.000610813	0.00041852	0.000383475
GITR L	0.001208486	0.000414988	0.000655107	2.07E-05	1.44E-05	4.67E-05
Granulysin	0.000535393	0.000276436	0.000334456	0.000710113	0.000210084	0.000507015
IL-1 R3	0.002171026	0.000212623	0.001204889	0	0	0

IL-15 R	4.14E-05	6.31E-06	3.23E-05	8.71E-05	3.59E-05	3.82E-05
IL-17E	0.000628874	0.000191503	0.000319193	0	0.000334387	0
IL-32 alpha	4.62E-07	5.14E-06	1.42E-05	2.80E-05	3.42E-05	1.94E-05
L1CAM-2	0	0	0.001875928	0.000438747	0.000209661	0.000267912
LRIG3	0.003802487	0.002354407	0.002488552	0.003222634	0.001727712	0.001583352
LRP-6	0	0	0.001068121	0	0.001209078	0.00023494
MEPE	0.004433132	0.002067192	0.002560173	0.002992616	0.001396811	0.001450054
Nectin-4	0.000516549	0.000209536	0.000410702	0.000507581	0.000450713	0.000426246
Periostin	0.000121468	0	4.82E-05	0.000424129	0.001551609	0.002042537
Persephin	0	0	0.000334398	0.001568229	0.00130065	0.001164063
Renin	0	5.86E-07	1.38E-06	0	0	0
RGM-B	0.000437377	2.19E-05	0.000268313	0	0	0
ROBO3	0.000307117	4.01E-06	0.000148022	7.00E-05	8.61E-05	8.68E-05
S100A8	8.64E-05	6.40E-05	0	0.000326024	0.001435112	0.000846418
Siglec-7	5.43E-05	0	3.63E-05	8.60E-05	0.000157835	0
Syndecan-3	0.008057245	0.002860222	0.004306003	8.53E-05	0	0
Thrombospondin-2	0.001588238	0.000613771	0.00186583	0	0.000504095	1.03E-05
Thrombospondin-5	8.69E-06	0	2.52E-05	0	0	0
Tie-1	0.000238412	3.87E-05	0.000218236	0	0	0
ULBP-2	0.000119245	3.74E-05	0.000143839	0	1.72E-05	0
AR	0.001518945	6.32E-06	0.002827001	9.54E-05	0.000119098	0.000113978
BDNF	8.29E-07	0	1.12E-06	1.74E-05	5.72E-06	4.42E-06
bFGF	6.68E-05	0	1.10E-05	6.56E-06	0	2.89E-06
BMP-4	3.81E-05	0	6.16E-06	0.000216804	9.67E-05	5.94E-05
BMP-5	0	0	0	0.001066245	0	0
BMP-7	4.27E-05	3.16E-06	0	0	0	2.63E-05
b-NGF	5.70E-07	0	1.79E-07	0	0	0
EGF	0	2.34E-07	0	1.37E-07	1.78E-07	1.57E-07
EGF R	6.85E-05	8.30E-06	2.10E-05	0.001802551	0.001692273	0.00125058
EG-VEGF	9.08E-06	0	1.34E-06	1.32E-05	0	1.71E-05
FGF-4	0	0.000290323	0.000211379	0	3.89E-05	7.40E-06
FGF-7	0	3.79E-06	0	0	4.62E-06	0
GDF-15	0.002050107	2.93E-05	0.001317968	0.002473174	0.002006363	0.001140955
GDNF	0	8.74E-07	0	0	1.84E-05	0
GH	3.69E-05	2.68E-05	5.38E-06	2.43E-05	2.26E-06	1.95E-05
HB-EGF	1.17E-05	0	0	0	4.44E-06	1.64E-05

HGF	0.000150798	0.000108605	0	0	0	0
IGFBP-1	1.72E-05	1.19E-06	0	0.002371223	0.002948347	0.000794802
IGFBP-2	0.03838013	2.36E-05	0.019261407	0.000800783	0.000553975	0.000167784
IGFBP-3	0.00020026	0.001165699	0.000171262	0.005406744	0.001752351	0.001958266
IGFBP-4	0.031543588	0	0.024088804	0.03510373	0.027153016	0.009237969
IGFBP-6	2.10E-05	0	0	0.000390494	0.000119614	0.000110561
IGF-1	0	0	0	0	0	0
Insulin	0.001044058	0.000180137	0.000168729	1.93E-05	3.44E-07	0
MCSF R	0	0	0	0	2.64E-06	0
NGF R	0	0	0	2.58E-05	1.61E-05	1.46E-05
NT-3	4.90E-05	0	0	0	0	1.96E-05
NT-4	0	0	1.82E-05	4.92E-05	2.59E-05	2.82E-05
OPG	0.000686742	5.60E-06	0.000191447	0.000123978	2.06E-05	4.00E-05
PDGF-AA	0.001285513	0	0.000706263	4.44E-05	6.61E-05	2.31E-05
PIGF	3.38E-06	0	2.33E-06	1.68E-05	2.67E-05	8.24E-06
SCF	0.000268546	1.21E-05	5.52E-05	4.27E-05	2.64E-05	2.18E-05
SCF R	2.66E-05	1.81E-06	5.52E-07	1.83E-05	0	0
TGFa	2.43E-06	6.21E-08	4.01E-07	1.57E-06	3.81E-06	2.33E-06
TGFb1	0.007929901	0	0.004063648	0.017025033	0.019838083	0.014877531
TGFb3	0.000190967	4.30E-05	1.10E-05	0	0	1.04E-05
VEGF	0.000875898	5.85E-06	0.001037997	0.000664594	0.001612044	0.000417328
VEGF R2	0	2.18E-06	0	0.00028497	0.000185174	0.000288385
VEGF R3	6.34E-07	0	0	0	1.46E-05	0
VEGF-D	0	0	0	9.98E-06	0	0
BLC	0	6.03E-08	1.18E-06	1.46E-06	1.19E-06	3.35E-06
Eotaxin	2.50E-06	0	3.83E-07	0	2.48E-06	7.86E-07
Eotaxin-2	0	0	0	4.84E-06	1.33E-05	9.82E-06
G-CSF	9.11E-07	1.90E-07	0	0.000203949	0.000538688	7.17E-05
GM-CSF	0	0	0	3.40E-05	3.23E-05	2.45E-05
I-309	0	0	0	1.15E-06	5.27E-06	2.33E-06
ICAM-1	0.002948357	0.000480536	0.001032933	0.016178641	0.011874304	0.010645761
IFNg	0	0	2.05E-06	4.87E-06	3.03E-06	5.64E-06
IL-1a	1.03E-05	0	0	4.68E-05	6.82E-05	8.17E-05
IL-1b	8.54E-07	0	0	1.63E-05	7.96E-06	1.25E-05
IL-1ra	1.42E-06	0	0	4.29E-06	3.79E-06	2.78E-06
IL-2	1.76E-07	2.56E-06	4.27E-06	2.09E-05	1.37E-05	3.49E-05

IL-4	0	0	0	2.76E-05	3.84E-06	3.06E-05
IL-5	1.27E-05	6.03E-06	7.33E-06	4.37E-06	1.40E-05	8.66E-06
IL-6	0	2.71E-05	4.87E-05	0.005839015	0.005347526	0.001303217
IL-6R	0.00047905	3.10E-05	0.000442797	0.00010098	0.000134065	0.0001382
IL-7	0.000101402	8.55E-05	8.72E-05	3.45E-06	4.52E-06	3.82E-06
IL-8	7.20E-06	1.27E-06	6.21E-06	0.000625293	0.000354265	0.000300696
IL-10	1.38E-06	1.75E-06	2.05E-06	1.22E-06	1.23E-06	1.77E-06
IL-11	8.90E-06	2.73E-05	5.31E-05	0.000100496	8.58E-05	3.02E-05
IL-12p40	0	0	0	2.96E-07	1.18E-06	9.83E-07
IL-12p70	0	4.46E-07	5.52E-07	1.77E-07	3.01E-07	2.65E-07
IL-13	0	0	8.19E-05	1.24E-06	2.39E-06	1.59E-06
IL-15	0	0	0	4.41E-06	6.28E-06	6.41E-06
IL-16	8.32E-06	0	2.97E-06	2.66E-06	4.51E-06	4.36E-06
IL-17	0	0	0	2.66E-05	1.73E-05	1.50E-05
MCP-1	2.26E-05	1.94E-06	3.01E-06	0.000613812	0.000413376	0.000241177
MCSF	4.35E-06	1.08E-06	5.69E-07	0.000619423	0.000484264	0.000234508
MIG	0	0	0	4.78E-05	2.84E-05	3.78E-05
MIP-1a	5.76E-06	1.77E-07	5.62E-07	4.18E-06	3.06E-06	2.87E-06
MIP-1b	0	0	3.97E-08	0.000484075	0.000333782	0.00011085
MIP-1d	2.60E-05	6.32E-07	6.72E-05	0	3.75E-07	1.80E-07
PDGF-BB	0.000260116	0	0.00011116	1.12E-05	1.63E-06	7.25E-07
RANTES	1.82E-05	0	1.04E-05	0.002044813	0.001384339	0.001016627
TIMP-1	0.026128371	0.000155777	0.016099051	0.007553942	0.006278853	0.003834425
TIMP-2	0.006191568	4.80E-06	0.007047748	0.030479665	0.013735155	0.008755265
TNFa	0	0	0	2.21E-05	6.68E-06	1.01E-05
TNFB	0	3.05E-06	2.84E-05	4.40E-05	5.89E-05	8.79E-05
TNF RI	0.005626251	6.53E-05	0.001616636	0.001322491	0.001408391	0.000573725
TNF RII	6.99E-05	3.05E-05	1.83E-05	5.47E-05	4.36E-05	2.66E-05
4-1BB	0	0	0	1.62E-05	2.62E-05	1.44E-05
ALCAM	0.000449516	0	0.000202712	0.002490335	0.001480593	0.00068372
B7-1	0	0	0	1.81E-05	3.44E-05	6.17E-08
BCMA	0	0	0	0	0	0
CD14	0	0	0	3.99E-05	2.43E-05	2.36E-05
CD30	0	0	0	1.23E-05	0.000180145	7.95E-05
CD40L	0	1.50E-05	0	0.000193611	6.46E-05	0.000119416
CEACAM-1	0	0	0	0.000410175	0.000287367	9.20E-05

DR6	6.54E-05	0	6.26E-05	0.003603996	0.004034371	0.000896132
Dtk	0	0	0	0	5.34E-05	4.23E-05
Endoglin	0	0	0	0	1.66E-05	4.28E-06
ErbB3	0.000719941	4.05E-06	0.000128655	7.63E-05	3.56E-05	4.87E-05
E-Selectin	0	0	0	0.006274286	0.004531215	0.001681711
Fas	0	0	0	0	0	1.06E-05
Fit-3L	3.00E-06	3.07E-07	1.62E-06	3.59E-06	3.79E-06	0
GITR	0	0	0	0	0	7.75E-06
HVEM	0	0	0	0	0	2.02E-05
ICAM-3	6.44E-07	0	0	0	2.23E-05	8.15E-05
Contactin-2	0	0	0	3.53E-06	0	5.57E-05
IL-1 RI	0	9.61E-07	1.95E-06	3.27E-06	4.19E-06	5.45E-06
IL-2 Rg	0	5.86E-05	0	0	2.38E-06	0
IL-10 Rb	0	0	0	1.14E-05	0	0
IL-17R	0	0	0	0.000432926	0.000163145	0.000161675
IL-21R	0	0	0	0.000407122	0.00034796	0
LIMPII	9.96E-07	0	0	0.002455471	0.001315258	0.001404589
Lipocalin-2	1.33E-05	0	2.16E-05	0.001219403	0.001088732	0.000863765
L-Selectin	0	0	0	0	0	0
LYVE-1	0	0	0	2.36E-05	9.96E-06	1.17E-05
MICA	0	0	0	0.000274176	0.000265747	0
MICB	5.15E-05	0	9.76E-06	0.000165091	0.000691765	9.39E-05
NRG1-b1	1.14E-05	4.21E-06	0	0	4.89E-05	0
PDGF Rb	0	0	0	0	0.000187274	0
PECAM-1	1.64E-05	0	1.73E-05	0	0	0
RAGE	0	5.42E-07	0	1.23E-05	1.09E-05	6.18E-06
TIM-1	0	0	0	1.16E-05	7.43E-06	8.50E-06
TRAIL R3	0	0	0	9.23E-06	0	1.64E-05
Trappin-2	9.31E-05	0	0.000127158	0.001886039	0.001595932	0.000306887
uPAR	0.000212093	0	0.000366683	0.003164916	0.00323144	0.001284836
VCAM-1	0	0	7.87E-06	0	0	0
XEDAR	0	0	0	3.30E-05	3.32E-05	0