

Appendix Table 1. List of top 100 differentially expressed genes in IGROV-1 cells compared to other ovarian cancer cells in NCI60 panel (OVCAR3, OVCAR4, OVCAR5, SKOV3).

The summary table contains the following information:

M-value (M) is the log2-fold change,

A-value (A) is the average expression value across all arrays and channels,

The moderated t-statistic (t) is the M-value to its standard error,

p-value (P) is obtained from the distribution of the moderated t-statistic (the-lower-the-better)

B-value (B) is the empirical Bayes log-odds of differential expression (the-higher-the-better).

Top two cell cycle-related genes are ranked 66 (CDKN1A; p21, Cip1) and 97 (CCND2; cyclin D2)

Rank	ID_REF	M	A	t	P.Value	adj.P.Val	B	Name	Symbol
1	151	5.671	11.678	27.008	1.31E-08	9.32E-05	9.085	AT rich interactive domain 1B (SWI1-like)	ARID1B
2	7856	4.804	10.341	24.249	2.87E-08	9.32E-05	8.666	Phospholipase A2, group IIA (platelets, synovial fluid)	PLA2G2A
3	3248	5.572	11.04	24.235	2.89E-08	9.32E-05	8.664		
4	4415	3.895	10.398	21.584	6.67E-08	0.000162	8.162		
5	4519	4.91	10.62	17.679	2.81E-07	0.000452	7.179	Zinc finger CCCH-type containing 13	ZC3H13
6	2383	3.95	10.094	17.649	2.85E-07	0.000452	7.17	Thy-1 cell surface antigen	THY1
7	269	4.521	8.2654	17.316	3.26E-07	0.000452	7.069	Nucleoporin 88kDa	NUP88
8	7768	4.057	11.592	15.25	8.09E-07	0.00098	6.364	Nuclear receptor subfamily 2, group F, member 2	NR2F2
9	7104	4.689	9.2398	13.933	1.54E-06	0.001225	5.834	Rh-associated glycoprotein	RHAG
10	180	3.394	9.4696	13.867	1.59E-06	0.001225	5.805	Endosulfine alpha	ENSA
11	4132	4.934	10.669	13.822	1.63E-06	0.001225	5.786	Phosphodiesterase 8A	PDE8A
12	6802	3.818	9.6038	13.805	1.64E-06	0.001225	5.779	Glycoprotein M6A	GPM6A
13	20	5.92	10.911	17.829	1.20E-06	0.001225	5.653	Caldesmon 1	CALD1
14	631	4.47	11.658	13.32	2.12E-06	0.001465	5.562	Myeloperoxidase	MPO
15	4919	3.38	10.487	13.052	2.44E-06	0.001579	5.438	Hemoglobin, epsilon 1	HBE1
16	8047	4.204	9.298	12.714	2.94E-06	0.00178	5.276	Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1	HSD3B1
17	4960	2.133	10.23	11.845	4.83E-06	0.002755	4.832	ATPase, Class V, type 10D	ATP10D

18	176	3.796	10.284	11.096	7.62E-06	0.003824	4.415		
19	5058	2.485	9.8084	10.965	8.28E-06	0.003824	4.339	Neurotrimin	HNT
20	9201	2.467	8.8184	10.948	8.37E-06	0.003824	4.328	Acid phosphatase 1, soluble	ACP1
21	6558	3.219	11.188	10.915	8.55E-06	0.003824	4.309	Lysyl oxidase	LOX
22	6813	2.307	12.057	10.891	8.68E-06	0.003824	4.295	Zinc finger, matrin type 1	ZMAT1
23	3103	3.751	8.3088	11.898	1.45E-05	0.005861	3.786	Protein tyrosine phosphatase, receptor type, C	PTPRC
24	5210	2.936	9.273	10.046	1.52E-05	0.005861	3.769	Endothelial cell-specific molecule 1	ESM1
25	1805	3.267	7.4947	10.02	1.55E-05	0.005861	3.751	Contactin associated protein-like 2	CNTNAP2
26	2958	2.471	9.7087	9.9949	1.57E-05	0.005861	3.735	Complement factor B	CFB
27	2770	3.33	7.8424	9.828	1.76E-05	0.006336	3.624	CD53 molecule	CD53
28	630	2.893	10.044	9.7634	1.85E-05	0.006393	3.581	Biliverdin reductase B (flavin reductase (NADPH))	BLVRB
29	3262	3.273	8.1645	9.6833	1.95E-05	0.006531	3.526		
30	9094	3.581	11.644	9.558	2.14E-05	0.006903	3.44	Proteoglycan 1, secretory granule	PRG1
31	7592	2.381	8.9269	9.468	2.28E-05	0.007126	3.378	Regulator of G-protein signalling 4	RGS4
32	7393	2.699	8.3702	9.2995	2.58E-05	0.00759	3.259		
33	7783	3.024	7.7251	9.2954	2.58E-05	0.00759	3.256	Hemoglobin, beta	HBB
34	2529	3.128	9.7367	8.9839	3.26E-05	0.009288	3.03	Family with sequence similarity 102, member B	FAM102B
35	1925	4.273	8.4957	8.7968	3.76E-05	0.010125	2.89		
36	9607	2.788	8.9642	8.7958	3.76E-05	0.010125	2.889	Mucin 13, cell surface associated	MUC13
37	1555	3.38	10.284	8.7447	3.91E-05	0.010247	2.85	Fibronectin 1	FN1
38	7848	3.523	10.874	8.5964	4.39E-05	0.011197	2.736	EGF-containing fibulin-like extracellular matrix protein 1	EFEMP1
39	1203	2.452	10.959	8.101	6.53E-05	0.015503	2.341		
40	1402	1.58	9.7339	8.0787	6.66E-05	0.015503	2.322	KIT ligand	KITLG
41	4654	2.913	8.2249	8.0321	6.92E-05	0.015503	2.284		
42	2888	1.618	9.2745	8.0219	6.98E-05	0.015503	2.275	Spermatogenesis associated 9	SPATA9
43	9215	2.795	7.8563	8.0209	6.98E-05	0.015503	2.274	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	CXCL12
44	4128	2.064	8.7925	8.0115	7.04E-05	0.015503	2.267	LIM domain only 4	LMO4
45	3479	1.415	9.0176	7.9276	7.55E-05	0.01624	2.196	Hematopoietic cell-specific Lyn substrate 1	HCLS1
46	2717	1.479	11.037	7.9028	7.71E-05	0.01624	2.175		
47	1875	3.07	8.8487	8.7693	9.04E-05	0.018254	2.132	C-type lectin domain family 2, member B	CLEC2B

48	3839	3.342	8.4281	7.7281	8.94E-05	0.018254	2.026	Neurotrimin	HNT
49	1253	3.602	10.528	7.4663	0.000112	0.022188	1.797	GATA binding protein 3	GATA3
50	1935	3.855	8.0326	7.4094	0.000118	0.022723	1.746	Vascular cell adhesion molecule 1	VCAM1
51	6531	1.967	8.838	7.394	0.00012	0.022723	1.732	Glycophorin A (MNS blood group)	GYPA
52	8832	3.839	10.742	7.2653	0.000134	0.024999	1.616	Secreted protein, acidic, cysteine-rich (osteonectin)	SPARC
53	3478	1.481	8.3728	7.2297	0.000138	0.025325	1.583	Myeloid cell nuclear differentiation antigen	MNDA
54	5143	2.309	8.8955	7.0651	0.000161	0.028875	1.43	Fibroblast activation protein, alpha	FAP
55	5925	1.897	7.9991	7.024	0.000167	0.029263	1.392	Rac/Cdc42 guanine nucleotide exchange factor (GEF) 6	ARHGEF6
56	1951	1.637	7.9773	7.0111	0.000169	0.029263	1.38	CDNA FLJ37082 fis, clone BRACE2016465	
57	5320	1.408	8.8248	6.9855	0.000173	0.02944	1.355	Glycophorin B (MNS blood group)	GYPB
58	2758	2.961	8.3682	6.9642	0.000177	0.02951	1.335	Progesterone receptor membrane component 1	PGRMC1
59	6623	1.508	8.8577	6.9311	0.000182	0.029915	1.304	Tumor necrosis factor, alpha-induced protein 6	TNFAIP6
60	8358	2.947	10.404	6.8815	0.000191	0.030814	1.256	EGF-containing fibulin-like extracellular matrix protein 1	EFEMP1
61	1490	3.622	9.2018	6.8496	0.000197	0.03123	1.226		
62	7638	3.961	10.165	6.8212	0.000202	0.031559	1.198	Aldehyde dehydrogenase 1 family, member A1	ALDH1A1
63	6548	1.826	8.5254	6.7009	0.000226	0.033665	1.081	Aquaporin 1 (Colton blood group)	AQP1
64	9217	1.999	6.9826	6.6773	0.000231	0.033665	1.058	Collagen, type I, alpha 2	COL1A2
65	2764	1.234	8.5406	6.6755	0.000232	0.033665	1.056		
66	3580	2.42	8.439	6.675	0.0002	0.03367	1.06	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)	CDKN1A
67	7441	1.228	9.6589	6.6679	0.000234	0.033665	1.048	Pim-1 oncogene	PIM1
68	5905	1.304	8.8479	6.6474	0.000238	0.033665	1.028	Collagen, type XVI, alpha 1	COL16A1
69	1809	2.476	7.8406	6.6368	0.000241	0.033665	1.018	Adenylate kinase 5	AK5
70	4390	1.363	8.331	6.6261	0.000243	0.033665	1.007	Ankyrin 1, erythrocytic	ANK1
71	2694	1.205	10.022	6.6078	0.000247	0.033665	0.989		
72	573	2.474	8.5531	6.5971	0.00025	0.033665	0.978		
73	1760	2.328	10.063	6.5105	0.000272	0.036119	0.892	Neurotrimin	HNT
74	5353	2.991	11.314	6.3921	0.000306	0.040036	0.772	Interleukin 8	IL8
75	7872	1.795	7.6666	6.3651	0.000314	0.04032	0.744	CDNA clone IMAGE:30924414	
76	3303	1.341	7.1129	6.3581	0.000316	0.04032	0.737	Hemoglobin, zeta	HBZ

77	485	2.149	7.1924	6.3364	0.000323	0.040665	0.715	G protein-coupled receptor 65	GPR65
78	3304	1.933	11.052	6.2793	0.000342	0.04239	0.656	Serum/glucocorticoid regulated kinase	SGK
79	1428	1.329	10.286	6.2692	0.000345	0.04239	0.645	Intestinal cell (MAK-like) kinase	ICK
80	2000	2.506	9.781	6.2279	0.00036	0.043639	0.602	Hypothetical gene supported by BX647608	LOC399959
81	3520	1.802	9.3378	6.2055	0.000368	0.043908	0.579	Glycoprotein M6B	GPM6B
82	7582	3.222	9.3414	6.195	0.000372	0.043908	0.568		
83	3672	-1.38	11.523	-6.185	0.000376	0.043908	0.558	Chromosome 14 open reading frame 94	C14orf94
84	6771	1.709	8.5023	6.057	0.000429	0.049469	0.422	Vitronectin	VTN
85	5900	1.311	11.257	6.0361	0.000438	0.049789	0.4	Hypothetical protein MGC9850	MGC9850
86	4041	1.655	8.4283	6.028	0.000442	0.049789	0.391	Protein kinase C, beta 1	PRKCB1
87	9691	3.521	12.659	5.992	0.000458	0.049914	0.352		
								Solute carrier family 5 (sodium-dependent vitamin transporter),	
88	6849	1.346	11.675	5.9721	0.000468	0.049914	0.331	member 6	SLC5A6
89	8139	1.106	9.0224	5.9695	0.000469	0.049914	0.328	Inositol 1,4,5-triphosphate receptor, type 1	ITPR1
90	7880	2.354	9.5366	5.9526	0.000478	0.049914	0.31	Chromosome 4 open reading frame 18	C4orf18
91	7158	1.318	9.1843	5.9497	0.000479	0.049914	0.307	Secretogranin V (7B2 protein)	SCG5
92	4135	1.974	8.2025	5.9386	0.000485	0.049914	0.295	Ligand dependent nuclear receptor corepressor	LCOR
								Cell adhesion molecule with homology to L1CAM	
93	1005	1.227	11.293	5.9326	0.000488	0.049914	0.288	(close homolog of L1)	CHL1
94	9106	1.311	11.292	5.9318	0.000488	0.049914	0.287		
								Protein kinase, AMP-activated, gamma 1 non-catalytic subunit	
95	6556	3.167	12.282	5.9227	0.000493	0.049914	0.277		PRKAG1
96	622	2.46	9.3319	5.9197	0.000494	0.049914	0.274		
97	5994	3.56	12.27	5.9	0.0005	0.05005	0.25	Cyclin D2	CCND2
98	8191	1.455	9.9877	5.8974	0.000506	0.050053	0.25	Serum/glucocorticoid regulated kinase	SGK
99	5646	-1.04	9.8659	-5.848	0.000533	0.051688	0.196	Zinc finger protein 582	ZNF582
100	5870	2.725	13.053	5.8476	0.000533	0.051688	0.196	Nuclear receptor subfamily 1, group H, member 3	NR1H3

Appendix Table 2. List of top 100 over-expressed genes in TOSE1 compared to IOSE25 cells.

Rank	Symbol	NAME	FoldChange
1	CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	9.009847235
2	SEPP1	selenoprotein P, plasma, 1	8.127256634
3	CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	7.865435029
4	AMY1A	amylase, alpha 1A (salivary)	7.476328283
5	MAGEA12	melanoma antigen family A, 12	7.142270222
6	SCNN1A	sodium channel, nonvoltage-gated 1 alpha	7.115255803
7	HLA-DPA1	major histocompatibility complex, class II, DP alpha 1	6.871530321
8	MAGEA11	melanoma antigen family A, 11	6.785537764
9	HBE1	hemoglobin, epsilon 1	6.676759841
10	MAGEA3	melanoma antigen family A, 3	6.491527293
11	MAGEA6	melanoma antigen family A, 6	6.406563555
12	HLA-DRA	major histocompatibility complex, class II, DR alpha	6.277538637
13	MAGEB2	melanoma antigen family B, 2	6.068164008
14	TIMP3	TIMP metalloproteinase inhibitor 3	6.065835129
15	HBG2	hemoglobin, gamma G	6.028230538
16	GSPT2	G1 to S phase transition 2	5.96163588
17	HLA-DRB1	major histocompatibility complex, class II, DR beta 1	5.844137306
18	SLPI	secretory leukocyte peptidase inhibitor	5.842870298
19	HLA-DRB1	major histocompatibility complex, class II, DR beta 1	5.838072624
20	AZGP1	alpha-2-glycoprotein 1, zinc-binding	5.807191086
21	LITAF	lipopolysaccharide-induced TNF factor	5.797574596
22	MAGEA2B	melanoma antigen family A, 2B	5.717513381
23	PLAC8	placenta-specific 8	5.705795806
24	LOC100130344	hypothetical protein LOC100130344	5.688856264
25	GPNMB	glycoprotein (transmembrane) nmb	5.683759317
26	LITAF	lipopolysaccharide-induced TNF factor	5.67430304
27	TIMP3	TIMP metalloproteinase inhibitor 3	5.639922383
28	MAGEA2	melanoma antigen family A, 2	5.576345773
29	EBF1	early B-cell factor 1	5.574340607
30	MAGEA10	melanoma antigen family A, 10	5.481351594
31	LOC283352	hypothetical protein LOC283352	5.44776355
32	ANXA8L2	annexin A8-like 2	5.405769318
33	SPANXA1	sperm protein associated with the nucleus, X-linked, family member A1	5.35292744
34	FLJ39632	hypothetical LOC642477	5.275075181
35	CLU	Clusterin	5.271681
36	HOXA9	homeobox A9	5.250948248
37	DOCK8	dedicator of cytokinesis 8	5.250527195
38	HLA-DPA1	major histocompatibility complex, class II, DP alpha 1	5.235297996
39	NA	NA	5.233701796
40	CES1	carboxylesterase 1 (monocyte/macrophage serine esterase 1)	5.214738594
41	SAA2	serum amyloid A2	5.209984638

42	CADM1	cell adhesion molecule 1	5.196448604
43	HLA-DRA	major histocompatibility complex, class II, DR alpha	5.176806822
44	EBF1	early B-cell factor 1	5.115095581
45	ID2	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	5.083917906
46	CRISP3	cysteine-rich secretory protein 3	5.034692171
47	MAGEA5	melanoma antigen family A, 5	5.033382237
48	CLU	Clusterin	5.029572761
49	GAGE12I	G antigen 12I	5.020177759
50	SPANXA1	sperm protein associated with the nucleus, X-linked, family member A1	4.989088638
51	SULF2	sulfatase 2	4.988341889
52	ERAP2	endoplasmic reticulum aminopeptidase 2	4.984954799
53	DHRS2	dehydrogenase/reductase (SDR family) member 2	4.981462917
54	GAGE7	G antigen 7	4.941529774
55	PRKAR2B	protein kinase, cAMP-dependent, regulatory, type II, beta	4.933956184
56	PKP2	plakophilin 2	4.925919725
57	SSX1	synovial sarcoma, X breakpoint 1	4.902209717
58	C10orf58	chromosome 10 open reading frame 58	4.898468476
59	RHBDL2	rhomboid, veinlet-like 2 (Drosophila)	4.870953814
60	FLJ39632	hypothetical LOC642477	4.869488226
61	CSTA	cystatin A (stefin A)	4.863997053
62	BEX2	brain expressed X-linked 2	4.846266091
63	MTUS1	mitochondrial tumor suppressor 1	4.836046194
64	CXCR4	chemokine (C-X-C motif) receptor 4	4.833396714
65	TPD52	tumor protein D52	4.82874189
66	MX2	myxovirus (influenza virus) resistance 2 (mouse)	4.800369971
67	SPANXA1	sperm protein associated with the nucleus, X-linked, family member A1	4.797135634
68	CSAG2	CSAG family, member 2	4.786616117
69	BST2	bone marrow stromal cell antigen 2	4.751674525
70	INDO	indoleamine-pyrrole 2,3 dioxygenase	4.722859932
71	MAGEC1	melanoma antigen family C, 1	4.721088488
72	MACROD2	MACRO domain containing 2	4.717562783
73	LOC401074	hypothetical LOC401074	4.704166032
74	NA	NA	4.686118676
75	CD74	CD74 molecule, major histocompatibility complex, class II invariant chain	4.680995121
76	GPR64	G protein-coupled receptor 64	4.65611192
77	CTAG2	cancer/testis antigen 2	4.652278746
78	GAGE6	G antigen 6	4.624831265
79	WDR72	WD repeat domain 72	4.607656596
80	MAGEB1	melanoma antigen family B, 1	4.601529921
81	HBG2	hemoglobin, gamma G	4.598269544
82	ACSL5	acyl-CoA synthetase long-chain family member 5	4.591866972
83	GAGE2C	G antigen 2C	4.581477163
84	SOHLH2	spermatogenesis and oogenesis specific basic helix-loop-helix 2	4.577787457

85	TPD52	tumor protein D52	4.572792837
86	TMPRSS3	transmembrane protease, serine 3	4.561251678
87	DOCK8	dedicator of cytokinesis 8	4.527542798
88	NA	NA	4.522236288
89	NR1H4	nuclear receptor subfamily 1, group H, member 4	4.520594761
90	SAA2	serum amyloid A2	4.489688871
91	NA	NA	4.483855253
92	ERAP2	endoplasmic reticulum aminopeptidase 2	4.482690399
93	C10orf116	chromosome 10 open reading frame 116	4.479432537
94	FGF13	fibroblast growth factor 13	4.476874829
95	PPFIBP2	PTPRF interacting protein, binding protein 2 (liprin beta 2)	4.469555402
96	GOLSYN	Golgi-localized protein	4.458686251
97	NPTX2	neuronal pentraxin II	4.431677959
98	RP1-21018.1	kazrin	4.423749169
99	LOC203274	hypothetical protein LOC203274	4.422544128
100	MGC39584	hypothetical gene supported by BC029568	4.418107798

Appendix Table 3. List of top 100 under-expressed genes in TOSE1 compared to IOSE25 cells.

Rank	Symbol	NAME	FoldChange
1	COL1A2	collagen, type I, alpha 2	-8.962618783
2	CXCL6	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	-8.959110122
3	COL1A2	collagen, type I, alpha 2	-7.604145174
4	MGST1	microsomal glutathione S-transferase 1	-7.516594892
5	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.498298718
6	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.278389227
7	CXCL12	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	-7.193394246
8	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.11991117
9	CD9	CD9 molecule	-6.725883224
10	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-6.681661298
11	MGST1	microsomal glutathione S-transferase 1	-6.639306647
12	NA	NA	-6.478396707
13	LRRC17	leucine rich repeat containing 17	-6.46348859
14	POSTN	periostin, osteoblast specific factor	-6.443554818
15	NA	NA	-6.304094655
16	PTGS2	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	-6.279328677
17	VCAN	versican	-6.234117574
18	RGS4	regulator of G-protein signaling 4	-6.200109045
19	EDIL3	EGF-like repeats and discoidin I-like domains 3	-6.179412426
20	CD200	CD200 molecule	-6.129233099
21	RGS4	regulator of G-protein signaling 4	-6.068523996
22	MGST1	microsomal glutathione S-transferase 1	-6.044562777
23	HNT	neurotrimin	-5.930518271
24	GABBR2	gamma-aminobutyric acid (GABA) B receptor, 2	-5.815858684
25	CERKL	ceramide kinase-like	-5.789970533
26	ATP8B1	ATPase, class I, type 8B, member 1	-5.724364842
27	VCAN	versican	-5.716974184
28	NRCAM	neuronal cell adhesion molecule	-5.666540908
29	MYOCD	myocardin	-5.647758411
30	SAMSN1	SAM domain, SH3 domain and nuclear localization signals 1	-5.636695998
31	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-5.628254747
32	CLDN11	claudin 11	-5.578355985
33	HAS2	hyaluronan synthase 2	-5.569984114
34	ROBO1	roundabout, axon guidance receptor, homolog 1 (Drosophila)	-5.566813749
35	VCAN	versican	-5.553076188

36	POSTN	periostin, osteoblast specific factor	-5.546119221
37	LXN	latexin	-5.537742347
38	VCAN	versican	-5.512552019
39	ARMCX2	armadillo repeat containing, X-linked 2	-5.462876357
40	PTGS2	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	-5.417461658
41	NA	NA	-5.382094639
42	VCAN	versican	-5.315912325
43	TAGLN	transgelin	-5.296766483
44	HHIP	hedgehog interacting protein	-5.285459972
45	PXDN	peroxidasin homolog (Drosophila)	-5.285285623
46	ADAM12	ADAM metallopeptidase domain 12	-5.255910917
47	NA	NA	-5.252037823
48	FBN2	fibrillin 2	-5.238673665
49	THBS2	thrombospondin 2	-5.230877885
50	LGALS3	lectin, galactoside-binding, soluble, 3	-5.229666666
51	SAMSN1	SAM domain, SH3 domain and nuclear localization signals 1	-5.22142637
52	ITGB3	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	-5.199918111
53	FN1	fibronectin 1	-5.194412058
54	B3GALNT1	beta-1,3-N-acetylgalactosaminyltransferase 1 (globoside blood group)	-5.150664582
55	COL1A2	collagen, type I, alpha 2	-5.142116916
56	LOC647121	embigin homolog (mouse) pseudogene	-5.139558728
57	CNTN3	contactin 3 (plasmacytoma associated)	-5.133414026
58	ITGA4	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	-5.118186136
59	CD200	CD200 molecule	-5.054262744
60	OSAP	ovary-specific acidic protein	-5.053280509
61	CCL2	chemokine (C-C motif) ligand 2	-5.052966047
62	UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)	-5.040704848
63	HAS2	hyaluronan synthase 2	-5.019315684
64	IL1B	interleukin 1, beta	-4.984670802
65	B3GALNT1	beta-1,3-N-acetylgalactosaminyltransferase 1 (globoside blood group)	-4.964565969
66	HHIP	hedgehog interacting protein	-4.907954608
67	TAGLN	transgelin	-4.893879858
68	PRR6	proline rich 6	-4.869059158
69	PXDN	peroxidasin homolog (Drosophila)	-4.868739691
70	EDIL3	EGF-like repeats and discoidin I-like domains 3	-4.863434298
71	ADAMTS6	ADAM metallopeptidase with thrombospondin type 1 motif, 6	-4.842853822
72	LIPG	lipase, endothelial	-4.828529001
73	ITGA4	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	-4.823187591
74	NA	NA	-4.813153664

75	ZFPM2	zinc finger protein, multitype 2	-4.79451121
76	COL5A2	collagen, type V, alpha 2	-4.745674526
77	PRR6	proline rich 6	-4.722062099
78	PLA2G4A	phospholipase A2, group IVA (cytosolic, calcium-dependent)	-4.705903772
79	CENPK	centromere protein K	-4.691162415
80	IL1B	interleukin 1, beta	-4.674522616
81	NA	NA	-4.659191564
82	RGS4	regulator of G-protein signaling 4	-4.60635702
83	TMTC4	transmembrane and tetratricopeptide repeat containing 4	-4.597467904
84	NA	NA	-4.583954866
85	CFHR1	complement factor H-related 1	-4.581115192
86	SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	-4.564426201
87	PHLDA2	pleckstrin homology-like domain, family A, member 2	-4.560996528
88	COL5A2	collagen, type V, alpha 2	-4.545923378
89	TNFAIP6	tumor necrosis factor, alpha-induced protein 6	-4.540773179
90	ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif, 1	-4.501146384
91	GREM1	gremlin 1, cysteine knot superfamily, homolog (<i>Xenopus laevis</i>)	-4.50105244
92	PKIA	protein kinase (cAMP-dependent, catalytic) inhibitor alpha	-4.478681143
93	OCIAD2	OCIA domain containing 2	-4.466695648
94	PBK	PDZ binding kinase	-4.464688076
95	NA	NA	-4.449910153
96	ANKRD50	ankyrin repeat domain 50	-4.442657154
97	NA	NA	-4.43766453
98	SHCBP1	SHC SH2-domain binding protein 1	-4.436389714
99	ANLN	anillin, actin binding protein	-4.40579166
100	NA	NA	-4.394046784

Appendix Table 4. List of top 100 over-expressed genes in TOSE4 compared to IOSE25 cells.

Rank	Symbol	NAME	FoldChange
1	MAGEA12	melanoma antigen family A, 12	7.461898352
2	PLAC8	placenta-specific 8	6.992521707
3	MAGEA2B	melanoma antigen family A, 2B	6.967963351
4	MAGEA2	melanoma antigen family A, 2	6.776776298
5	MAGEA3	melanoma antigen family A, 3	6.763704215
6	MAGEA6	melanoma antigen family A, 6	6.751254034
7	SCNN1A	sodium channel, nonvoltage-gated 1 alpha	6.352956008
8	MAGEA11	melanoma antigen family A, 11	6.263207754
9	LOC283352	hypothetical protein LOC283352	6.192810836
10	GPR64	G protein-coupled receptor 64	6.153070599
11	MAGEA10	melanoma antigen family A, 10	6.069668136
12	SEPP1	selenoprotein P, plasma, 1	6.014150699
13	TPD52	tumor protein D52	5.967409366
14	HOXA9	homeobox A9	5.908054917
15	EBF1	early B-cell factor 1	5.826767189
16	SSX1	synovial sarcoma, X breakpoint 1	5.806353988
17	DOCK8	dedicator of cytokinesis 8	5.8043058
18	LITAF	lipopolysaccharide-induced TNF factor	5.699036111
19	GSPT2	G1 to S phase transition 2	5.639114817
20	NA	NA	5.589368423
21	LITAF	lipopolysaccharide-induced TNF factor	5.58746797
22	GAGE12I	G antigen 12I	5.567794159
23	NA	NA	5.551289145
24	MAGEA5	melanoma antigen family A, 5	5.492640228
25	GAGE7	G antigen 7	5.487310678
26	SULF2	sulfatase 2	5.47192941
27	TIMP3	TIMP metalloproteinase inhibitor 3	5.444499723
28	TPD52	tumor protein D52	5.421561353
29	CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	5.40298804
30	ABLIM1	actin binding LIM protein 1	5.397220945
31	FLJ39632	hypothetical LOC642477	5.298952424
32	ANXA8L2	annexin A8-like 2	5.288706083
33	DNAJC15	DnaJ (Hsp40) homolog, subfamily C, member 15	5.28041003
34	UCA1	urothelial cancer associated 1	5.280381704
35	NA	NA	5.25298452
36	EBF1	early B-cell factor 1	5.243018555
37	FGF13	fibroblast growth factor 13	5.185826855
38	GAGE6	G antigen 6	5.166642033
39	TPD52	tumor protein D52	5.16473135
40	MTUS1	mitochondrial tumor suppressor 1	5.156834951
41	MAGEC1	melanoma antigen family C, 1	5.142798951
42	CSAG2	CSAG family, member 2	5.13292251
43	DOCK8	dedicator of cytokinesis 8	5.115552728
44	GAGE2C	G antigen 2C	5.097350436
45	ERAP2	endoplasmic reticulum aminopeptidase 2	5.091527701
46	MAGEB2	melanoma antigen family B, 2	5.061405201
47	LOC401074	hypothetical LOC401074	5.060645327
48	PRKAR2B	protein kinase, cAMP-dependent,	5.055715744

		regulatory, type II, beta	
49	RNF182	ring finger protein 182	5.055267373
50	CD24	CD24 molecule	5.037272602
51	CD24	CD24 molecule	5.020939821
52	EPDR1	ependymin related protein 1 (zebrafish)	4.917866051
53	NR1H4	nuclear receptor subfamily 1, group H, member 4	4.906858979
54	GAGE4	G antigen 4	4.881885441
55	GOLSYN	Golgi-localized protein	4.863550661
56	BST2	bone marrow stromal cell antigen 2	4.850581636
57	HBE1	hemoglobin, epsilon 1	4.848912206
58	HLA-DPA1	major histocompatibility complex, class II, DP alpha 1	4.764868186
59	SNX10	sorting nexin 10	4.759862464
60	MITF	microphthalmia-associated transcription factor	4.733754792
61	MMP3	matrix metalloproteinase 3 (stromelysin 1, progelatinase)	4.693791569
62	LOC100131139	similar to double homeobox A	4.659888669
63	MGC16075	hypothetical protein MGC16075	4.655186014
64	C9orf84	chromosome 9 open reading frame 84	4.654884018
65	C10orf58	chromosome 10 open reading frame 58	4.649086662
66	PSG5	pregnancy specific beta-1-glycoprotein 5	4.634483438
67	SAMD12	sterile alpha motif domain containing 12	4.629685016
68	CXorf61	chromosome X open reading frame 61	4.603675158
69	NR1H4	nuclear receptor subfamily 1, group H, member 4	4.575458931
70	SSX1	synovial sarcoma, X breakpoint 1	4.56555852
71	RHBDL2	rhomboid, veinlet-like 2 (Drosophila)	4.546596808
72	VCX2	variable charge, X-linked 2	4.518575471
73	ERAP2	endoplasmic reticulum aminopeptidase 2	4.506911556
74	MAGEC2	melanoma antigen family C, 2	4.490602992
75	SLPI	secretory leukocyte peptidase inhibitor	4.482523451
76	MAGEB1	melanoma antigen family B, 1	4.446615383
77	RP1-21018.1	kazrin	4.439312167
78	GPNMB	glycoprotein (transmembrane) nmb	4.429317728
79	NLGN4X	neuroligin 4, X-linked	4.425508783
80	BEX2	brain expressed X-linked 2	4.384306529
81	TIMP3	TIMP metalloproteinase inhibitor 3	4.371019772
82	SOHLH2	spermatogenesis and oogenesis specific basic helix-loop-helix 2	4.332037332
83	LIMCH1	LIM and calponin homology domains 1	4.331758113
84	CD24	CD24 molecule	4.304419473
85	PKP2	plakophilin 2	4.300687251
86	SFMBT2	Scm-like with four mbt domains 2	4.300521699
87	CPVL	carboxypeptidase, vitellogenic-like	4.287625351
88	PASD1	PAS domain containing 1	4.256217884
89	LOC283352	hypothetical protein LOC283352	4.251017197
90	FOXR2	forkhead box R2	4.246059325
91	LIMCH1	LIM and calponin homology domains 1	4.243070554
92	NA	NA	4.237434649

93	VCX2	variable charge, X-linked 2	4.228880145
94	TMEM56	transmembrane protein 56	4.222735099
95	SULF2	sulfatase 2	4.217521698
96	NA	NA	4.211179886
97	TMPRSS3	transmembrane protease, serine 3	4.177424345
98	CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	4.151163929
99	NA	NA	4.145698442
100	LIMCH1	LIM and calponin homology domains 1	4.137668224

Appendix Table 5. List of top 100 under-expressed genes in TOSE4 compared to IOSE25 cells.

Rank	Symbol	NAME	FoldChange
1	POSTN	periostin, osteoblast specific factor	-9.252202969
2	CXCL6	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	-8.968461357
3	COL1A2	collagen, type I, alpha 2	-8.856321771
4	POSTN	periostin, osteoblast specific factor	-8.65553169
5	MGST1	microsomal glutathione S-transferase 1	-8.308586339
6	PTGS2	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	-8.258765641
7	MGST1	microsomal glutathione S-transferase 1	-8.085454242
8	VCAN	versican	-8.038548773
9	VCAN	versican	-7.998185794
10	MGST1	microsomal glutathione S-transferase 1	-7.687376625
11	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.533568094
12	VCAN	versican	-7.452083994
13	SAMSN1	SAM domain, SH3 domain and nuclear localization signals 1	-7.405921712
14	COL1A2	collagen, type I, alpha 2	-7.357543242
15	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.355777401
16	CXCL12	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	-7.345093354
17	PTGS2	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	-7.277106007
18	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-7.235493149
19	VCAN	versican	-7.164881097
20	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-6.814861428
21	EDIL3	EGF-like repeats and discoidin I-like domains 3	-6.762705907
22	CD9	CD9 molecule	-6.733712103
23	VCAN	versican	-6.485781584
24	NA	NA	-6.40932874
25	COL3A1	collagen, type III, alpha 1	-6.378401713
26	LRRC17	leucine rich repeat containing 17	-6.337064357
27	COL3A1	collagen, type III, alpha 1	-6.224052384
28	GABBR2	gamma-aminobutyric acid (GABA) B receptor, 2	-6.047365448
29	COL3A1	collagen, type III, alpha 1	-6.037517482
30	CD200	CD200 molecule	-6.037079676
31	NA	NA	-5.97799317
32	PLA2G4A	phospholipase A2, group IVA (cytosolic, calcium-dependent)	-5.974665751
33	CERKL	ceramide kinase-like	-5.900279812
34	ROBO1	roundabout, axon guidance receptor,	-5.872645879

		homolog 1 (Drosophila)	
35	HNT	neurotrimin	-5.847627674
36	NRCAM	neuronal cell adhesion molecule	-5.845926634
37	IL1B	interleukin 1, beta	-5.806355474
38	SAMSN1	SAM domain, SH3 domain and nuclear localization signals 1	-5.799751814
39	PAPPA	pregnancy-associated plasma protein A, pappalysin 1	-5.799068908
40	MYOCD	myocardin	-5.798954836
41	CLDN11	claudin 11	-5.797272705
42	VGLL3	vestigial like 3 (Drosophila)	-5.714117555
43	DCN	decorin	-5.706252501
44	ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif, 1	-5.558013608
45	HAS2	hyaluronan synthase 2	-5.545834241
46	LOC647121	embigin homolog (mouse) pseudogene	-5.535157105
47	DCN	decorin	-5.527926024
48	DCN	decorin	-5.488467078
49	PXDN	peroxidasin homolog (Drosophila)	-5.476514215
50	NA	NA	-5.461036117
51	CFHR1	complement factor H-related 1	-5.439834833
52	RGS4	regulator of G-protein signaling 4	-5.375907928
53	AREG	amphiregulin	-5.354789778
54	IL1B	interleukin 1, beta	-5.335824947
55	CNTN3	contactin 3 (plasmacytoma associated)	-5.322074393
56	TMEM47	transmembrane protein 47	-5.266842888
57	ITGB3	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	-5.258761536
58	HAS2	hyaluronan synthase 2	-5.246638908
59	NA	NA	-5.229640368
60	HTATIP2	HIV-1 Tat interactive protein 2, 30kDa	-5.227939487
61	ARMCX2	armadillo repeat containing, X-linked 2	-5.214220637
62	HHIP	hedgehog interacting protein	-5.204245151
63	ADAM12	ADAM metallopeptidase domain 12	-5.194084174
64	RGS4	regulator of G-protein signaling 4	-5.174070293
65	ITGA4	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	-5.164785994
66	OSAP	ovary-specific acidic protein	-5.163444025
67	LIPG	lipase, endothelial	-5.147880452
68	UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)	-5.137503738
69	MME	membrane metallo-endopeptidase	-5.112443163
70	COL5A2	collagen, type V, alpha 2	-5.10063382
71	PXDN	peroxidasin homolog (Drosophila)	-5.097296709
72	CD200	CD200 molecule	-5.084152121
73	COL1A2	collagen, type I, alpha 2	-5.073714398
74	LGALS3	lectin, galactoside-binding, soluble, 3	-5.07037576
75	FN1	fibronectin 1	-5.065096849
76	NA	NA	-5.03513306
77	COL5A2	collagen, type V, alpha 2	-4.989880963
78	B3GALNT1	beta-1,3-N-	-4.98571871

		acetylgalactosaminyltransferase 1 (globoside blood group)	
79	ITGA4	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	-4.98459731
80	EDIL3	EGF-like repeats and discoidin I-like domains 3	-4.952306676
81	ZFPM2	zinc finger protein, multitype 2	-4.920596235
82	SLC6A15	solute carrier family 6, member 15	-4.898983615
83	PRR6	proline rich 6	-4.88192324
84	DSEL	dermatan sulfate epimerase-like	-4.878826054
85	HHIP	hedgehog interacting protein	-4.871625049
86	THBS2	thrombospondin 2	-4.871579554
87	NA	NA	-4.858266673
88	SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	-4.857002908
89	FBN2	fibrillin 2	-4.844377207
90	PRR6	proline rich 6	-4.823188513
91	TNFAIP6	tumor necrosis factor, alpha-induced protein 6	-4.804323401
92	SMARCA1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 1	-4.788165143
93	TNS1	tensin 1	-4.732351462
94	TNFAIP6	tumor necrosis factor, alpha-induced protein 6	-4.730912741
95	DCN	decorin	-4.716601196
96	PRKD1	protein kinase D1	-4.654048496
97	B3GALNT1	beta-1,3-N-acetylgalactosaminyltransferase 1 (globoside blood group)	-4.620241106
98	CCL2	chemokine (C-C motif) ligand 2	-4.589093532
99	DCLK1	doublecortin-like kinase 1	-4.586851018
100	SLIT2	slit homolog 2 (Drosophila)	-4.576389988

Appendix Table 6. List of top 100 over-expressed genes in MRC5-VA compared to MRC5 cells.

Rank	Symbol	NAME	FoldChange
1	PLAC8	placenta-specific 8	7.81501995
2	BEX1	brain expressed, X-linked 1	7.3790961
3	PPP2R2B	protein phosphatase 2 (formerly 2A), regulatory subunit B, beta isoform	6.71214544
4	DAPK1	death-associated protein kinase 1	6.54175825
5	ELOVL7	ELOVL family member 7, elongation of long chain fatty acids (yeast)	6.48035994
6	NFIB	nuclear factor I/B	6.41527121
7	DKFZP686A01247	hypothetical protein	6.35578832
8	NFIB	nuclear factor I/B	6.22555993
9	F11R	F11 receptor	6.14145504
10	TFAP2A	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)	6.10428834
11	RSAD2	radical S-adenosyl methionine domain containing 2	5.95302443
12	CPA3	carboxypeptidase A3 (mast cell)	5.88131153
13	ODZ2	odz, odd Oz/ten-m homolog 2 (Drosophila)	5.81869826
14	ZNF236	zinc finger protein 236	5.76954071
15	ELAVL2	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 2 (Hu antigen B)	5.73599233
16	NA	NA	5.68806044
17	LRRN1	leucine rich repeat neuronal 1	5.67992411
18	PKP2	plakophilin 2	5.67240988
19	ISL1	ISL1 transcription factor, LIM/homeodomain, (islet-1)	5.57314066
20	PLEKHA7	pleckstrin homology domain containing, family A member 7	5.57292639
21	NRXN3	neurexin 3	5.4305188
22	RSAD2	radical S-adenosyl methionine domain containing 2	5.24803779
23	DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6	5.2451391
24	L1CAM	L1 cell adhesion molecule	5.1658404
25	DKFZP686A01247	hypothetical protein	5.15984521
26	FAT3	FAT tumor suppressor homolog 3 (Drosophila)	5.1592285
27	LOC151760	hypothetical LOC151760	5.14776916
28	HPSE	heparanase	5.05048351
29	HERC5	hect domain and RLD 5	5.04179406
30	FLRT2	fibronectin leucine rich transmembrane protein 2	5.02803211
31	TMEM46	transmembrane protein 46	4.88259061
32	DKFZP686A01247	hypothetical protein	4.85468334
33	DCAMKL1	doublecortin and CaM kinase-like 1	4.84969067
34	KRT17	keratin 17	4.84382639
35	HPSE	heparanase	4.75996338

36	FAM84B	family with sequence similarity 84, member B	4.75741262
37	DSC2	desmocollin 2	4.72580688
38	OCN	occludin	4.71578519
39	CHRD1	chordin-like 1	4.6951908
40	HSPA1B	heat shock 70kDa protein 1B	4.6865335
41	SHOX2	short stature homeobox 2	4.6534561
42	ZIC2	Zic family member 2 (odd-paired homolog, Drosophila)	4.62033778
43	AGTR1	angiotensin II receptor, type 1	4.59483711
44	TNNT1	troponin T type 1 (skeletal, slow)	4.56998299
45	KIF5C	kinesin family member 5C	4.53643051
46	SLC39A8	solute carrier family 39 (zinc transporter), member 8	4.48869717
47	NFIB	nuclear factor I/B	4.465677
48	C12orf39	chromosome 12 open reading frame 39	4.46443608
49	NAALAD2	N-acetylated alpha-linked acidic dipeptidase 2	4.45314662
50	KRT80	keratin 80	4.45207884
51	TGFB2	transforming growth factor, beta 2	4.41462042
52	PCLO	piccolo (presynaptic cytomatrix protein)	4.37712266
53	GCH1	GTP cyclohydrolase 1 (dopa-responsive dystonia)	4.35558655
55	PLAC8	placenta-specific 8	7.81501995
56	BEX1	brain expressed, X-linked 1	7.3790961
57	PPP2R2B	protein phosphatase 2 (formerly 2A), regulatory subunit B, beta isoform	6.71214544
58	DAPK1	death-associated protein kinase 1	6.54175825
59	ELOVL7	ELOVL family member 7, elongation of long chain fatty acids (yeast)	6.48035994
60	NFIB	nuclear factor I/B	6.41527121
61	DKFZP686A01247	hypothetical protein	6.35578832
62	NFIB	nuclear factor I/B	6.22555993
63	F11R	F11 receptor	6.14145504
64	TFAP2A	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)	6.10428834
65	RSAD2	radical S-adenosyl methionine domain containing 2	5.95302443
66	CPA3	carboxypeptidase A3 (mast cell)	5.88131153
67	ODZ2	odz, odd Oz/ten-m homolog 2 (Drosophila)	5.81869826
68	ZNF236	zinc finger protein 236	5.76954071
69	ELAVL2	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 2 (Hu antigen B)	5.73599233
70	NA	NA	5.68806044
71	LRRN1	leucine rich repeat neuronal 1	5.67992411
72	PKP2	plakophilin 2	5.67240988
73	ISL1	ISL1 transcription factor, LIM/homeodomain, (islet-1)	5.57314066
74	PLEKHA7	pleckstrin homology domain containing, family A member 7	5.57292639
75	NRXN3	neurexin 3	5.4305188
76	RSAD2	radical S-adenosyl methionine domain	5.24803779

		containing 2	
77	DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6	5.2451391
78	L1CAM	L1 cell adhesion molecule	5.1658404
79	DKFZP686A01247	hypothetical protein	5.15984521
80	FAT3	FAT tumor suppressor homolog 3 (Drosophila)	5.1592285
81	LOC151760	hypothetical LOC151760	5.14776916
82	HPSE	heparanase	5.05048351
83	HERC5	hect domain and RLD 5	5.04179406
84	FLRT2	fibronectin leucine rich transmembrane protein 2	5.02803211
85	TMEM46	transmembrane protein 46	4.88259061
86	DKFZP686A01247	hypothetical protein	4.85468334
87	DCAMKL1	doublecortin and CaM kinase-like 1	4.84969067
88	KRT17	keratin 17	4.84382639
89	HPSE	heparanase	4.75996338
90	FAM84B	family with sequence similarity 84, member B	4.75741262
91	DSC2	desmocollin 2	4.72580688
92	OCLN	occludin	4.71578519
93	CHRD1	chordin-like 1	4.6951908
94	HSPA1B	heat shock 70kDa protein 1B	4.6865335
95	SHOX2	short stature homeobox 2	4.6534561
96	ZIC2	Zic family member 2 (odd-paired homolog, Drosophila)	4.62033778
97	AGTR1	angiotensin II receptor, type 1	4.59483711
98	TNNT1	troponin T type 1 (skeletal, slow)	4.56998299
99	KIF5C	kinesin family member 5C	4.53643051
100	SLC39A8	solute carrier family 39 (zinc transporter), member 8	4.48869717

Appendix Table 7. List of top 100 under-expressed genes in MRC5-VA compared to MRC5 cells.

Rank	Symbol	NAME	FoldChange
1	MMP1	matrix metalloproteinase 1 (interstitial collagenase)	-7.8378948
2	COL6A3	collagen, type VI, alpha 3	-7.1503904
3	PRDX2	peroxiredoxin 2	-7.0249096
4	CTHRC1	collagen triple helix repeat containing 1	-7.0043301
5	HSPA1A	heat shock 70kDa protein 1A	-6.7816537
6	CDH11	cadherin 11, type 2, OB-cadherin (osteoblast)	-6.3608848
7	DCN	decorin	-6.2939479
8	ADFP	adipose differentiation-related protein	-6.2828877
9	FOXF2	forkhead box F2	-6.0827868
10	PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	-6.0646869
11	DCN	decorin	-6.0621433
12	TRHDE	thyrotropin-releasing hormone degrading enzyme	-5.9903122
13	MAP1A	microtubule-associated protein 1A	-5.9310774
14	DCN	decorin	-5.9045422
15	GPR37	G protein-coupled receptor 37 (endothelin receptor type B-like)	-5.7827348
16	IGFBP4	insulin-like growth factor binding protein 4	-5.7374997
17	SPON2	spondin 2, extracellular matrix protein	-5.6943437
18	HSPB6	heat shock protein, alpha-crystallin-related, B6	-5.6410502
19	HTATIP2	HIV-1 Tat interactive protein 2, 30kDa	-5.604696
20	EIF1AY	eukaryotic translation initiation factor 1A, Y-linked	-5.5772232
21	TRPA1	transient receptor potential cation channel, subfamily A, member 1	-5.5334381
22	CUGBP2	CUG triplet repeat, RNA binding protein 2	-5.4884189
23	EREG	epiregulin	-5.486438
24	MGC9913	hypothetical protein MGC9913	-5.4796524
25	PDGFRA	platelet-derived growth factor receptor, alpha polypeptide	-5.4350182
26	TSPYL5	TSPY-like 5	-5.417333
27	NAP1L5	nucleosome assembly protein 1-like 5	-5.3885071
28	THY1	Thy-1 cell surface antigen	-5.376286
29	LAMA4	laminin, alpha 4	-5.3699424
30	SLC2A10	solute carrier family 2 (facilitated glucose transporter), member 10	-5.3512147
31	NES	nestin	-5.3467211
32	PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	-5.3396973
33	PDE5A	phosphodiesterase 5A, cGMP-specific	-5.3243805
34	POSTN	periostin, osteoblast specific factor	-5.3046581
35	HGF	hepatocyte growth factor (hepapoietin A; scatter factor)	-5.2912496

36	HSPB6	heat shock protein, alpha-crystallin-related, B6	-5.2778853
37	NA	NA	-5.2447567
38	NPTX1	neuronal pentraxin I	-5.2224191
39	CTSK	cathepsin K	-5.2052115
40	KCNN2	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-5.2041054
41	C15orf48	chromosome 15 open reading frame 48	-5.187474
42	HOXB5	homeobox B5	-5.1776638
43	HNT	neurotrimin	-5.1564558
44	FEZ1	fasciculation and elongation protein zeta 1 (zygin I)	-5.1241821
45	PDE5A	phosphodiesterase 5A, cGMP-specific	-5.1100835
46	HOXB6	homeobox B6	-5.0888106
47	MGC9913	hypothetical protein MGC9913	-5.0404308
48	MGST1	microsomal glutathione S-transferase 1	-5.0270187
49	CUGBP2	CUG triplet repeat, RNA binding protein 2	-5.0221075
50	CCND1	cyclin D1	-5.0108755
51	KIAA1199	KIAA1199	-5.0066491
52	HTRA1	HtrA serine peptidase 1	-4.9741433
53	TMEM35	transmembrane protein 35	-4.9735508
54	MMP1	matrix metalloproteinase 1 (interstitial collagenase)	-7.8378948
55	COL6A3	collagen, type VI, alpha 3	-7.1503904
56	PRDX2	peroxiredoxin 2	-7.0249096
57	CTHRC1	collagen triple helix repeat containing 1	-7.0043301
58	HSPA1A	heat shock 70kDa protein 1A	-6.7816537
59	CDH11	cadherin 11, type 2, OB-cadherin (osteoblast)	-6.3608848
60	DCN	decorin	-6.2939479
61	ADFP	adipose differentiation-related protein	-6.2828877
62	FOXF2	forkhead box F2	-6.0827868
63	PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	-6.0646869
64	DCN	decorin	-6.0621433
65	TRHDE	thyrotropin-releasing hormone degrading enzyme	-5.9903122
66	MAP1A	microtubule-associated protein 1A	-5.9310774
67	DCN	decorin	-5.9045422
68	GPR37	G protein-coupled receptor 37 (endothelin receptor type B-like)	-5.7827348
69	IGFBP4	insulin-like growth factor binding protein 4	-5.7374997
70	SPON2	spondin 2, extracellular matrix protein	-5.6943437
71	HSPB6	heat shock protein, alpha-crystallin-related, B6	-5.6410502
72	HTATIP2	HIV-1 Tat interactive protein 2, 30kDa	-5.604696
73	EIF1AY	eukaryotic translation initiation factor 1A, Y-linked	-5.5772232
74	TRPA1	transient receptor potential cation channel, subfamily A, member 1	-5.5334381
75	CUGBP2	CUG triplet repeat, RNA binding protein 2	-5.4884189

76	EREG	epiregulin	-5.486438
77	MGC9913	hypothetical protein MGC9913	-5.4796524
78	PDGFRA	platelet-derived growth factor receptor, alpha polypeptide	-5.4350182
79	TSPYL5	TSPY-like 5	-5.417333
80	NAP1L5	nucleosome assembly protein 1-like 5	-5.3885071
81	THY1	Thy-1 cell surface antigen	-5.376286
82	LAMA4	laminin, alpha 4	-5.3699424
83	SLC2A10	solute carrier family 2 (facilitated glucose transporter), member 10	-5.3512147
84	NES	nestin	-5.3467211
85	PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	-5.3396973
86	PDE5A	phosphodiesterase 5A, cGMP-specific	-5.3243805
87	POSTN	periostin, osteoblast specific factor	-5.3046581
88	HGF	hepatocyte growth factor (hepapoietin A; scatter factor)	-5.2912496
89	HSPB6	heat shock protein, alpha-crystallin-related, B6	-5.2778853
90	NA	NA	-5.2447567
91	NPTX1	neuronal pentraxin I	-5.2224191
92	CTSK	cathepsin K	-5.2052115
93	KCNN2	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-5.2041054
94	C15orf48	chromosome 15 open reading frame 48	-5.187474
95	HOXB5	homeobox B5	-5.1776638
96	HNT	neurotrimin	-5.1564558
97	FEZ1	fasciculation and elongation protein zeta 1 (zygin I)	-5.1241821
98	PDE5A	phosphodiesterase 5A, cGMP-specific	-5.1100835
99	HOXB6	homeobox B6	-5.0888106
100	MGC9913	hypothetical protein MGC9913	-5.0404308

Appendix Table 8. List of over-expressed MAGE genes in TOSE1 compared to IOSE25 cells (among top 100 over-expressed genes).

Rank	Gene		FoldChange
5	MAGEA12	melanoma antigen family A, 12	7.142270222
8	MAGEA11	melanoma antigen family A, 11	6.785537764
10	MAGEA3	melanoma antigen family A, 3	6.491527293
11	MAGEA6	melanoma antigen family A, 6	6.406563555
22	MAGEA2B	melanoma antigen family A, 2B	5.717513381
28	MAGEA2	melanoma antigen family A, 2	5.576345773
30	MAGEA10	melanoma antigen family A, 10	5.481351594
47	MAGEA5	melanoma antigen family A, 5	5.033382237
71	MAGEC1	melanoma antigen family C, 1	4.721088488
80	MAGEB1	melanoma antigen family B, 1	4.601529921

Appendix Table 9. List of over-expressed MAGE genes in TOSE4 compared to IOSE25 cells (among top 100 over-expressed genes).

Rank	Gene		FoldChange
1	MAGEA12	melanoma antigen family A, 12	7.461898352
3	MAGEA2B	melanoma antigen family A, 2B	6.967963351
4	MAGEA2	melanoma antigen family A, 2	6.776776298
5	MAGEA3	melanoma antigen family A, 3	6.763704215
6	MAGEA6	melanoma antigen family A, 6	6.751254034
8	MAGEA11	melanoma antigen family A, 11	6.263207754
11	MAGEA10	melanoma antigen family A, 10	6.069668136
24	MAGEA5	melanoma antigen family A, 5	5.492640228

Appendix Table 10. List of over-expressed MAGE genes in MRC5-VA compared to MRC5 cells (of all differentially expressed genes; 2-fold change cut-off).

Rank	Gene		FoldChange
125	MAGEA12	melanoma antigen family A, 12	4.19376517
178	MAGEA6	melanoma antigen family A, 6	3.84412263
248	MAGEA3	melanoma antigen family A, 3	3.5852987