

**Supplementary Table 3. Upregulated genes and functional group allocations**

Gene symbol	Gene description	Fold change
Extracellular matrix its remodeling		
<i>CDH1</i>	Cadherin 1, type 1	5.5
<i>SFRP2</i>	Secreted frizzled-related protein 2	4.5
<i>SPP1</i>	Secreted phosphoprotein 1	3.2
<i>LAMA1</i>	Laminin, alpha 1	3.1
<i>CTSV</i>	Cathepsin V	3.1
<i>LCP1</i>	Lymphocyte cytosolic protein 1 (L-plastin)	3.1
<i>BGN</i>	Biglycan	2
Signal transduction		
<i>SLC7A3</i>	Solute carrier family 7, member 3	14.5
<i>PRDM14</i>	PR domain-containing 14	11.2
<i>GDF3</i>	Growth differentiation factor 3	9.1
<i>EPCAM</i>	Epithelial cell adhesion molecule	8.1
<i>HERC5</i>	HECT and RLD domain-containing E3 ubiquitin protein ligase 5	7.8
<i>TRIM71</i>	Tripartite motif-containing 71, E3 ubiquitin protein ligase	6.7
<i>APELA</i>	Apelin receptor early endogenous ligand	6.2
<i>CDH1</i>	Cadherin 1, type 1	5.5
<i>SOX2</i>	SRY box 2	5.4
<i>CGA</i>	Glycoprotein hormones, alpha polypeptide	4.9
<i>NR6A1</i>	Nuclear receptor subfamily 6, group A, member 1	4.9
<i>IFIT1</i>	Interferon-induced protein with tetratricopeptide repeats 1	4.8
<i>SALL4</i>	Spalt-like transcription factor 4	4.6
<i>SFRP2</i>	Secreted frizzled-related protein 2	4.5
<i>HPGD</i>	Hydroxyprostaglandin dehydrogenase 15-(NAD)	4.5
<i>CCL5</i>	Chemokine (C-C motif) ligand 5	4.3
<i>IFIT2</i>	Interferon-induced protein with tetratricopeptide repeats 2	4
<i>RGS13</i>	Regulator of G-protein signaling 13	3.8
<i>SEMA6A</i>	Sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A	3.8
<i>SFN</i>	Stratifin	3.8
<i>CTH</i>	Cystathionine gamma-lyase	3.7
<i>IFIT3</i>	Interferon-induced protein with tetratricopeptide repeats 3	3.6
<i>FZD5</i>	Frizzled class receptor 5	3.6
<i>CNR1</i>	Cannabinoid receptor 1 (brain)	3.5
<i>CXCL10</i>	Chemokine (C-X-C motif) ligand 10	3.2
<i>UNC5D</i>	Unc-5 netrin receptor D	3.2
<i>CRHBP</i>	Corticotropin-releasing hormone-binding protein	3.1
<i>LAMA1</i>	Laminin, alpha 1	3.1
<i>IFI6</i>	Interferon, alpha-inducible protein 6	3.1
<i>CD70</i>	CD70 molecule	3.1
<i>LCP1</i>	Lymphocyte cytosolic protein 1 (L-plastin)	3.1
<i>CEACAM6</i>	Carcinoembryonic antigen-related cell adhesion molecule 6 (nonspecific cross-reacting antigen)	3
<i>FZD3</i>	Frizzled class receptor 3	3
<i>IFIH1</i>	Interferon-induced, with helicase C domain 1	2.9
<i>EDNRB</i>	Endothelin receptor type B	2.6
<i>LPAR4</i>	Lysophosphatidic acid receptor 4	2.5
<i>LGI1</i>	Leucine-rich, glioma inactivated 1	2.5
<i>PREX2</i>	Phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 2	2.5
<i>RAB15</i>	RAB15, member RAS oncogene family	2.4
<i>LGALS12</i>	Lectin, galactoside-binding, soluble, 12	2.3
<i>EPHA7</i>	EPH receptor A7	2.3
<i>GPC4</i>	Glypican 4	2.1

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**Supplementary Table 3. Continued**

Gene symbol	Gene description	Fold change
<i>ADGRV1</i>	Adhesion G protein-coupled receptor V1	2.1
Cell cycle		
<i>TUBB4A</i>	Tubulin, beta 4A class IVa	9.2
<i>HERC5</i>	HECT and RLD domain-containing E3 ubiquitin protein ligase 5	7.8
<i>TRIM71</i>	Tripartite motif-containing 71, E3 ubiquitin protein ligase	6.7
<i>SOX2</i>	SRY box 2	5.4
<i>HPGD</i>	Hydroxyprostaglandin dehydrogenase 15-(NAD)	4.5
<i>PLA2G16</i>	Phospholipase A2, group XVI	3.8
<i>SFN</i>	Stratifin	3.8
<i>FZD3</i>	Frizzled class receptor 3	3
Transcription factor		
<i>CDH1</i>	Cadherin 1, type 1	5.5
<i>SOX2</i>	SRY box 2	5.4
<i>NR6A1</i>	Nuclear receptor subfamily 6, group A, member 1	4.9
<i>DNMT3B</i>	DNA (cytosine-5)-methyltransferase 3 beta	4.7
<i>SALL4</i>	Spalt-like transcription factor 4	4.6
<i>CHCHD2</i>	Coiled-coil-helix-coiled-coil-helix domain-containing 2	4.5
<i>CTH</i>	Cystathionine gamma-lyase	3.7
<i>BEX1</i>	Brain-expressed X-linked 1	3
<i>MED12L</i>	Mediator complex subunit 12-like	2.7
<i>SCML2</i>	Sex comb on midleg-like 2 (drosophila)	2.7
<i>FOXI3</i>	Forkhead box I3	2.6
<i>ZNF280A</i>	Zinc finger protein 280A	2.1
Cellular metabolism		
<i>DPPA3</i>	Developmental pluripotency-associated 3	20.6
<i>ZNF729</i>	Zinc finger protein 729	12.6
<i>PRDM14</i>	PR domain-containing 14	11.2
<i>LIN28A</i>	Lin-28 homolog A ( <i>Caenorhabditis elegans</i> )	9.9
<i>TUBB4A</i>	Tubulin, beta 4A class IVa	9.2
<i>GDF3</i>	Growth differentiation factor 3	9.1
<i>HRASLS5</i>	HRAS-like suppressor family, member 5	8.9
<i>DNMT3L</i>	DNA (cytosine-5)-methyltransferase 3-like	8.9
<i>ESRP1</i>	Epithelial-splicing regulatory protein 1	8.5
<i>EPCAM</i>	Epithelial cell adhesion molecule	8.1
<i>HERC5</i>	HECT and RLD domain-containing E3 ubiquitin protein ligase 5	7.8
<i>GLDC</i>	Glycine dehydrogenase (decarboxylating)	7.8
<i>TRIM71</i>	Tripartite motif-containing 71, E3 ubiquitin protein ligase	6.7
<i>ZNF208</i>	Zinc finger protein 208	6.6
<i>ZFP42</i>	ZFP42 zinc finger protein	6.6
<i>RNF125</i>	Ring finger protein 125, E3 ubiquitin protein ligase	6.4
<i>DPPA4</i>	Developmental pluripotency-associated 4	6.1
<i>ZNF257</i>	Zinc finger protein 257	5.7
<i>CDH1</i>	Cadherin 1, type 1	5.5
<i>SOX2</i>	SRY box 2	5.4
<i>CGA</i>	Glycoprotein hormones, alpha polypeptide	4.9
<i>NR6A1</i>	Nuclear receptor subfamily 6, group A, member 1	4.9
<i>DNMT3B</i>	DNA (cytosine-5)-methyltransferase 3 beta	4.7
<i>SALL4</i>	Spalt-like transcription factor 4	4.6
<i>SFRP2</i>	Secreted frizzled-related protein 2	4.5
<i>HPGD</i>	Hydroxyprostaglandin dehydrogenase 15-(NAD)	4.5

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**Supplementary Table 3. Continued**

Gene symbol	Gene description	Fold change
<i>CHCHD2</i>	Coiled-coil-helix-coiled-coil-helix domain-containing 2	4.5
<i>NLRP2</i>	NLR family, pyrin domain-containing 2	4.5
<i>PLBD1</i>	Phospholipase B domain-containing 1	4.3
<i>CCL5</i>	Chemokine (C-C motif) ligand 5	4.3
<i>SP8</i>	Sp8 transcription factor	4.1
<i>ZNF90</i>	Zinc finger protein 90	3.8
<i>TET1</i>	Tet methylcytosine dioxygenase 1	3.8
<i>PLA2G16</i>	Phospholipase A2, group XVI	3.8
<i>SFN</i>	Stratifin	3.8
<i>CTH</i>	Cystathionine gamma-lyase	3.7
<i>ZNF114</i>	zZinc finger protein 114	3.6
<i>FZD5</i>	Frizzled class receptor 5	3.6
<i>ZNF826P</i>	Zinc finger protein 826, pseudogene	3.5
<i>CNR1</i>	Cannabinoid receptor 1 (brain)	3.5
<i>ALPL</i>	Alkaline phosphatase, liver/bone/kidney	3.3
<i>CXCL10</i>	Chemokine (C-X-C motif) ligand 10	3.2
<i>SLC7A8</i>	Solute carrier family 7 (amino acid transporter light chain, L system), member 8	3.2
<i>CECR2</i>	Cat eye syndrome chromosome region, candidate 2	3.2
<i>IFI6</i>	Interferon, alpha-inducible protein 6	3.1
<i>CTSV</i>	Cathepsin V	3.1
<i>BEX1</i>	Brain-expressed X-linked 1	3
<i>IFIH1</i>	Interferon-induced, with helicase C domain 1	2.9
<i>MED12L</i>	Mediator complex subunit 12-like	2.7
<i>SCML2</i>	Sex comb on midleg-like 2 (drosophila)	2.7
<i>SPRR2A</i>	Small proline-rich protein 2A	2.7
<i>EDNRB</i>	Endothelin receptor type B	2.6
<i>FOXP3</i>	Forkhead box P3	2.6
<i>ALDH1A1</i>	Aldehyde dehydrogenase 1 family, member A1	2.5
<i>EPHA7</i>	EPH receptor A7	2.3
<i>GPC4</i>	Glypican 4	2.1
<i>ZNF280A</i>	Zinc finger protein 280A	2.1
Cytokine and immune response		
<i>GDF3</i>	Growth differentiation factor 3	9.1
<i>HERC5</i>	HECT and RLD domain-containing E3 ubiquitin protein ligase 5	7.8
<i>RNF125</i>	Ring finger protein 125, E3 ubiquitin protein ligase	6.4
<i>CDH1</i>	Cadherin 1, type 1	5.5
<i>IFIT1</i>	Interferon-induced protein with tetratricopeptide repeats 1	4.8
<i>NLRP2</i>	NLR family, pyrin domain-containing 2	4.5
<i>CCL5</i>	chemokine (C-C motif) ligand 5	4.3
<i>IFIT2</i>	Interferon-induced protein with tetratricopeptide repeats 2	4
<i>IFIT3</i>	Interferon-induced protein with tetratricopeptide repeats 3	3.6
<i>FZD5</i>	Frizzled class receptor 5	3.6
<i>CNR1</i>	Cannabinoid receptor 1 (brain)	3.5
<i>CXCL10</i>	Chemokine (C-X-C motif) ligand 10	3.2
<i>SPP1</i>	Secreted phosphoprotein 1	3.2
<i>CRHBP</i>	Corticotropin-releasing hormone-binding protein	3.1
<i>IFI6</i>	Interferon, alpha-inducible protein 6	3.1
<i>CD70</i>	CD70 molecule	3.1
<i>LCP1</i>	Lymphocyte cytosolic protein 1 (L-plastin)	3.1
<i>IFIH1</i>	Interferon-induced, with helicase C domain 1	2.9
<i>IFI44L</i>	Interferon-induced protein 44-like	2.4
<i>TNFRSF9</i>	Tumor necrosis factor receptor superfamily, member 9	2.2