Supplemental data

Supplementary Figure 1

Generation of *NPHS1-GFP* iPS cells

(A) TALEN activity tested in HEK 293 cells. The targeted region was PCR-amplified and cloned. Deletions in the *NPHS1* locus were detected in four clones out of 10 that were sequenced.

(B) PCR screening of human iPS cell homologous recombinants

(C) Southern blot screening of human iPS cell homologous recombinants

Supplementary Figure 2

Human glomeruli generated from *NPHS1-GFP* iPS cells

(A) Morphological changes of GFP-positive glomeruli during differentiation *in vitro*. A different aggregate from the one shown in Figure 2 is presented. Lower panels: higher magnification of the areas marked by rectangles in the upper panels. Note the shape changes of the glomerulus (arrowheads). Scale bars: 500 μm.

(B) Some, but not all, of the Bowman's capsule cells were positive for nephrin (48E11 antibody: magenta) and GFP (green). Scale bars: 10 μm.

Supplementary Figure 3

Histology of human podocytes generated *in vitro*

(A) Transmission electron microscopy of the foot processes. Lower magnification of Figure 4H. Scale bars: 500 nm.

(B) (C) The slit diaphragm between the foot processes. Higher magnification of the

regions marked by rectangles in panel A. Scale bar: 100 nm.

(D) Absence of mesangial or vascular endothelial cells in the induced glomeruli. Anti-PDGFRβ and CD31 antibodies were used to detect the two lineages, respectively, and no positive signals were observed in the glomeruli. Podocytes are positive for WT1. Nuclei are counterstained with Nuclear Fast Red. Scale bars: 20 μm.

Supplementary Figure 4

Cluster analysis of gene expression in various human tissues

(A) Unbiased cluster analysis across various human tissues using the top 300 genes enriched in GFP-positive podocytes.

(B) Unbiased cluster analysis across various human tissues using 190 probes overlapping in podocytes *in vitro*, adult human glomeruli, and adult mouse podocytes.

(C) A detailed gene list of cluster analysis from (A).

Supplementary Figure 5

Transplanted iPS-derived nephron progenitors form vascularized glomeruli

(A) Flattening of the iPS cell-derived tissue under the kidney capsule, immediately after transplantation by the conventional method. The graph shows areas of the transplanted tissues before (pre) and immediately after transplantation (post). Note the tissue area increased because of flattening in the absence of agarose rods (Rod-).

(B) iPS cell-derived tissue at day 20 after transplantation using agarose rods.

(C) The stromal cells were of human origin. Frozen sections were stained with an anti-human nuclear antibody (magenta). Right panel: higher magnified image of the rectangle in the left panel. The magenta signal was detected in most cells, except for the

kidney tissues of the host mouse (*) and the endothelial cells of mouse origin (green: MECA-32).

(D) The endothelial cells in the induced glomeruli were of mouse origin. Staining of mouse-specific endothelial antigen (green; MECA-32) and nephrin (magenta).

(E) HUVEC were not integrated into iPS cell-derived glomeruli. Staining with anti-human specific CD31 antibody (magenta) and WT1 (green). Right two panels: higher magnified images of the rectangles in the left panels.

(F) Podocalyxin is expressed in the apical domains of the iPS cell-derived podocytes. Staining with the anti-human specific podocalyxin antibody (green) and WT1 (magenta). Middle panel: higher magnified image of the human iPS cell-derived glomerulus (upper rectangle in the left panel). Right panel: higher magnified image of the glomerulus (the lower rectangle in the left panel) in the kidney tissues of the host mouse (*). Note the absence of signal in mouse podocytes, confirming the species specificity of the antibody.

(G) HE staining of vascularized glomeruli upon transplantation without VEGF in the agarose rods (day 20). Right panel: staining of CD31 (green) and nephrin (magenta). Two independent transplantation experiments showed consistent results.

(H) HE staining of vascularized glomeruli upon transplantation without HUVEC and MSC (day 20). Right panel: staining of CD31 (green) and nephrin (magenta). Two independent transplantation experiments showed consistent results.

Scale bars: A, B: 1 mm, C–H: 20 μm

Supplementary Table 1

Genes common to iPS-derived podocytes *in vitro*, human glomeruli, and mouse

podocytes *in vivo*. Continued gene list of Table 1 (fold induction: between 1.5 and 2.5)

Supplementary Table 2

Genes enriched in human podocytes *in vitro* and adult human glomeruli *in vivo*

Supplementary Table 3

Genes enriched in human podocytes *in vitro* and mouse podocytes *in vivo*

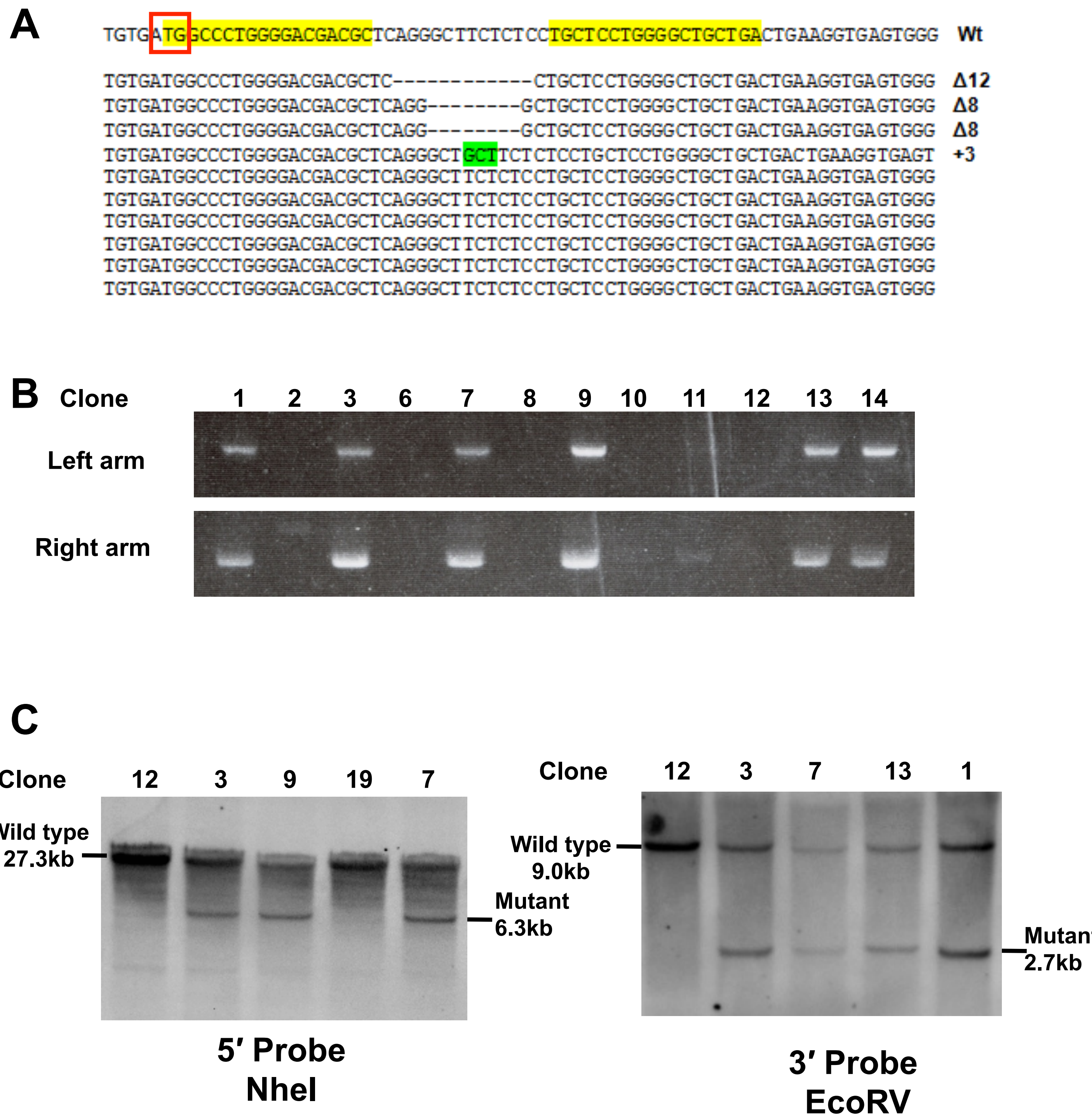
Supplementary Table 4

Genes enriched in podocytes *in vitro*, but not in adult human glomeruli or mouse podocytes *in vivo*

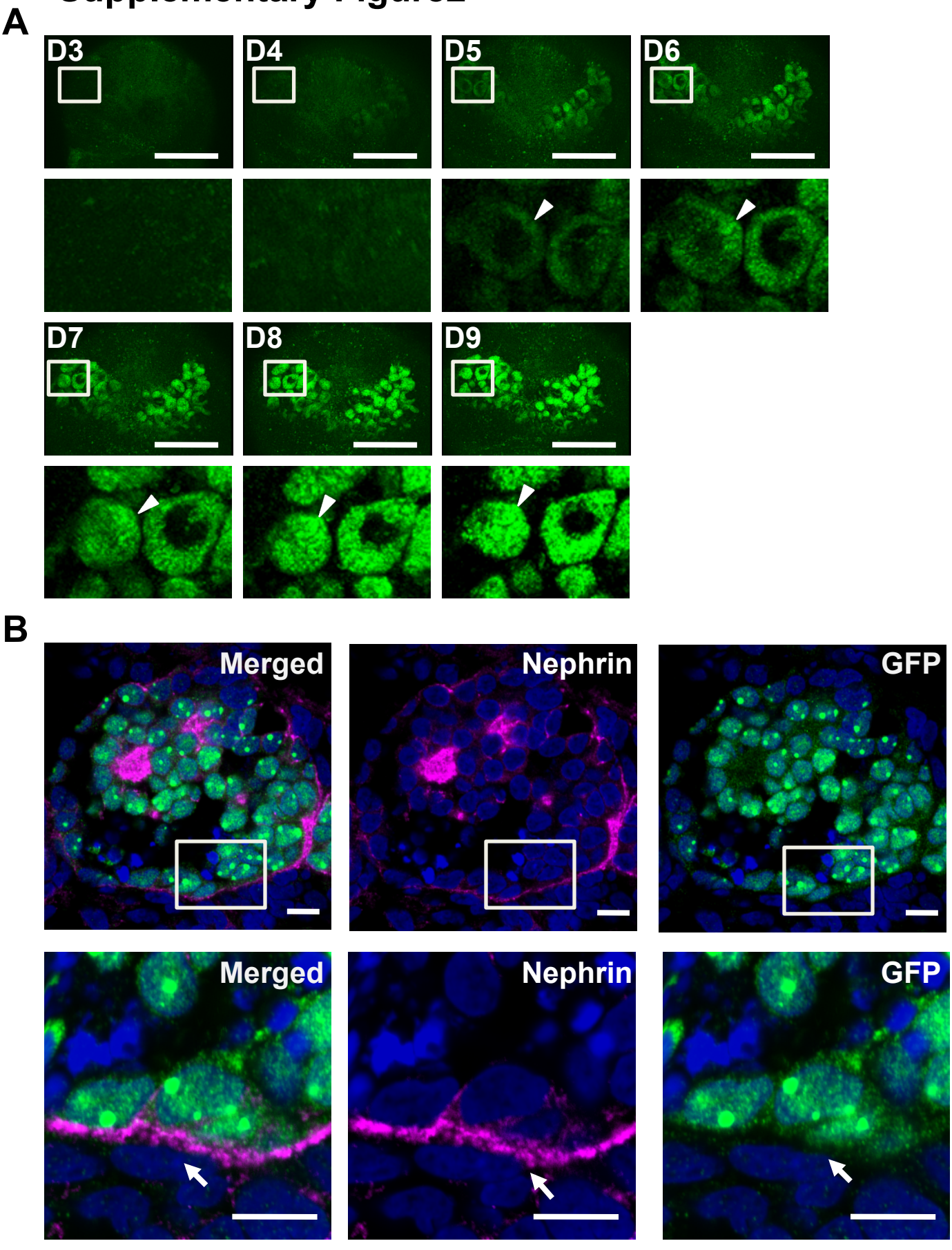
Supplementary Table 5

Primer sequences used for qPCR analysis

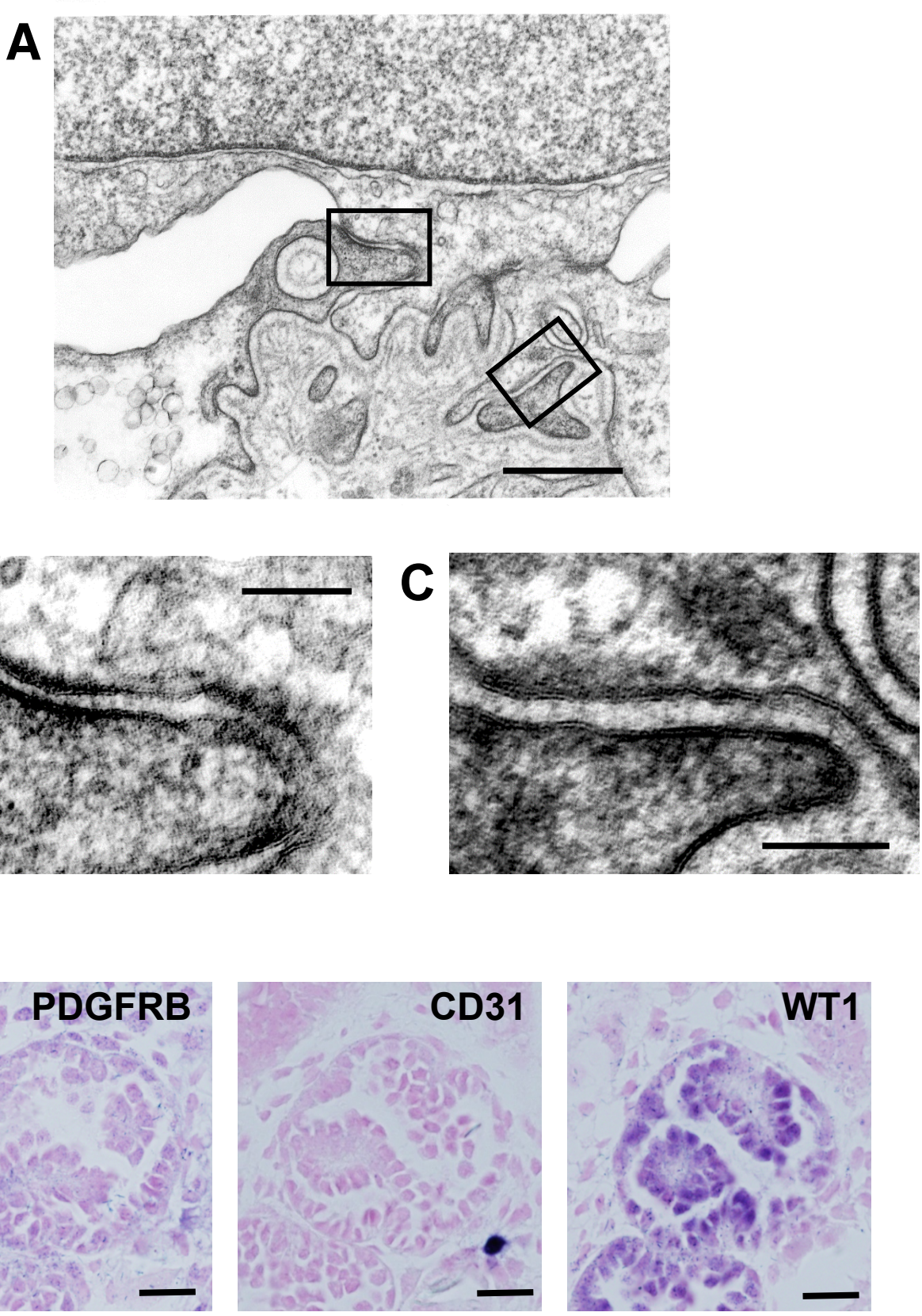
Supplementary Figure 1



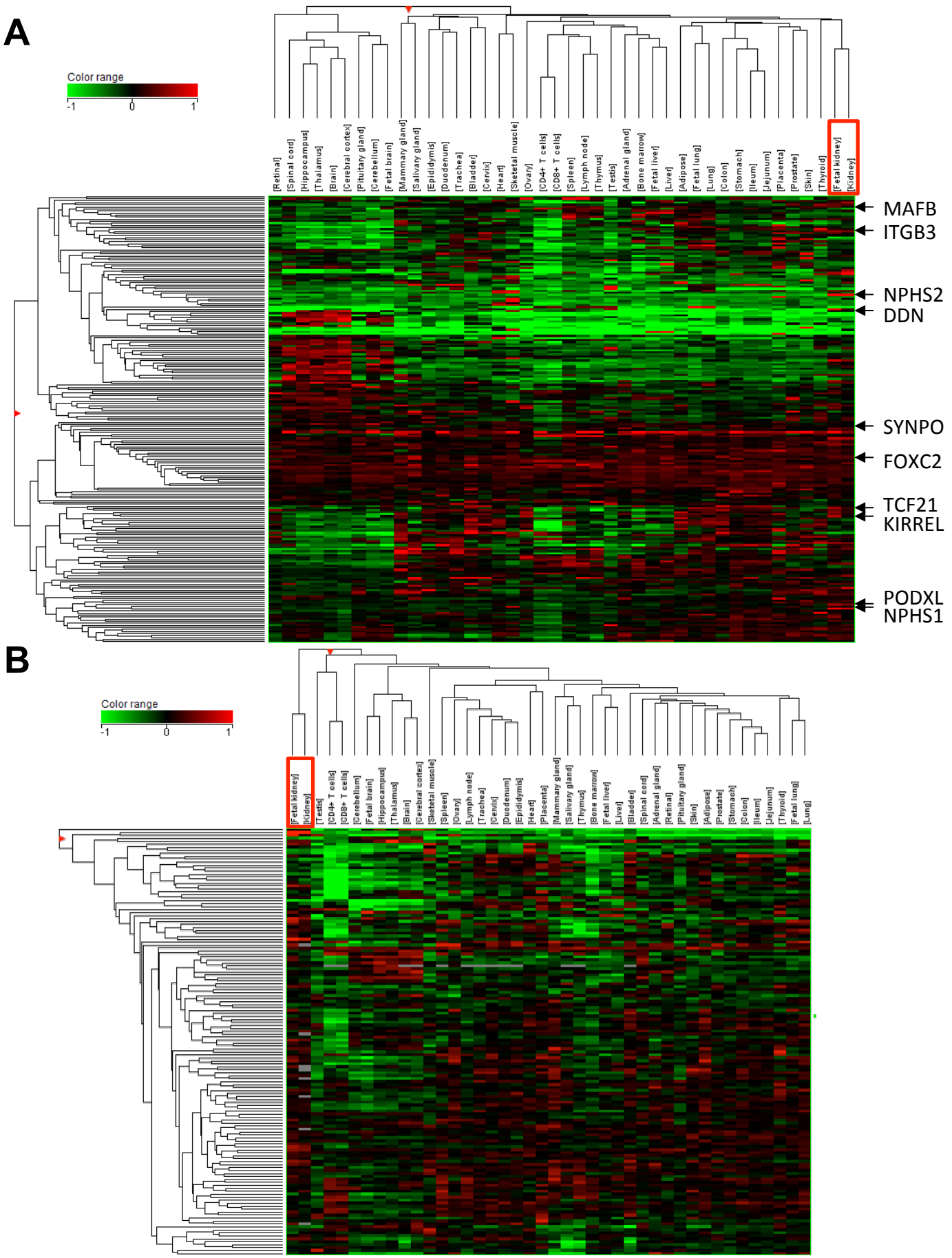
Supplementary Figure2



Supplementary Figure 3



Supplementary Figure 4



C

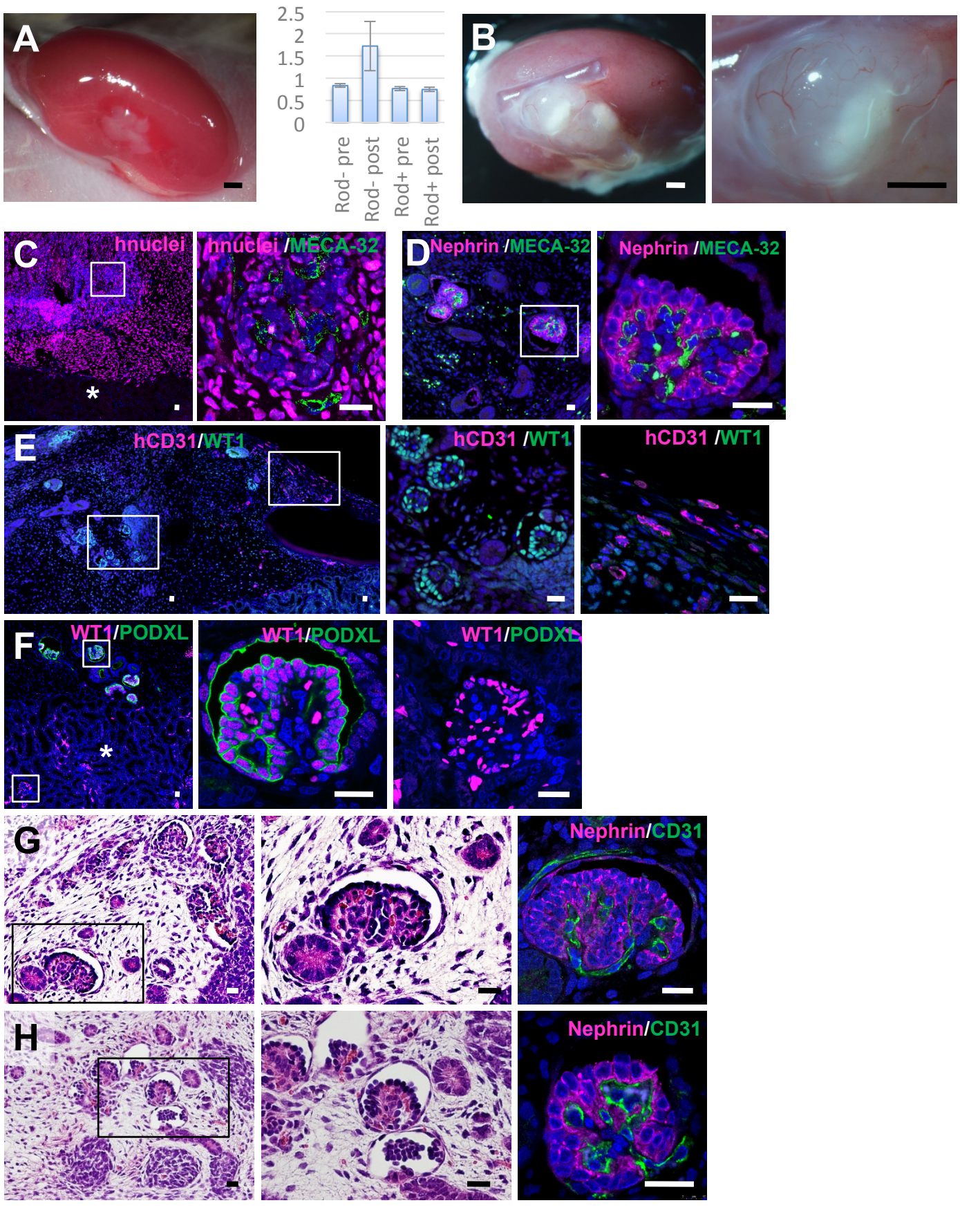
[Fetal kidney](normalized)	[Kidney](normalized)	Gene symbol
−0.232	−0.244	CPNE5
−0.290	−0.425	CD22
0.127	0.110	ST3GAL6
0.242	0.676	CGNL1
0.369	0.292	VEGFA
0.390		MAFB
−0.386	−0.676	CCDC109B
−0.151	0.132	IL6R
−0.376	−0.363	C2
−0.342	−0.434	LILRB3
	−0.165	AIF1
0.316	0.219	ARHGAP29
−0.368		CHI3L1
−0.533	−0.123	G0S2
−0.138	−0.149	F13A1
	−0.253	IL1R1
0.186	0.130	ITGB3
0.646	0.475	BCAM
0.367		DSC2
		CTGF
−0.939	−0.759	ANXA1
−0.451	−0.523	TMEM40
−0.182	−0.215	ANXA3
−0.122		ADM
−0.164	−0.210	GPRC5A
−0.171	−0.232	GPR126
		FRY
−0.265		PRUNE2
−0.139		CHP2
0.143	0.305	ADRA2C
		S100A7
−0.122	−0.103	TPPP2
−0.471	−0.415	HSPB8
−0.478	−0.510	HSD11B1
−0.266	−0.331	TPPP3
−0.263		HTRA1
	0.622	GPX3
0.665	0.952	ENPEP
0.566	0.990	SULT1C2
−0.220	−0.285	PDE4DIP
−0.126	0.105	FAM134B
−0.352		KLK7
−0.321	0.389	GPD1
−0.211	−0.424	DMBT1
−0.135	−0.269	LRRC36
−0.721	−0.788	FAM81B
0.530	0.349	CLIC5
−0.169	−0.415	TRIM54
1.179	1.115	NPHS2
−0.487	−0.558	PLAC1
−0.577		MYBPC2
−0.438	−0.517	TNNI1
−0.447	−0.495	TNNT2
−0.583	−0.469	PDLIM5
−1.108	−0.928	LAMP3

[Fetal kidney](normalized)	[Kidney](normalized)	Gene symbol
0.936	0.204	WT1
		DDN
−1.056	−0.963	PLEKHB1
−1.131	−1.018	HEPACAM
−0.686	−0.597	PPP2R2B
−0.210	−0.644	OLFM3
−0.203		GABRA2
−0.807	−0.559	PCP4
−0.602	−0.724	NECAB1
−0.951	−0.708	DSC1
−1.357		MYH13
−1.027	−1.328	SERPIND1
−0.883	−0.860	PAPPA
−0.405		ENPP4
	−0.161	NEBL
	−0.164	SPOCK2
0.175		CTTNBP2
	−0.206	CRTAC1
−0.230	−0.206	GPR98
−0.400	0.365	MRO
−0.597	−0.380	CPEB1
−0.483	−0.268	DNAJC6
	−0.114	CORO2B
	0.151	HSPA12A
	−0.277	PPFIA4
0.807	0.516	PTPRO
		FAM81A
0.227		TMEM178A
	0.258	FGF1
−0.171		MLC1
−0.355	−0.321	DLG2
−0.424	−0.390	CAMK2A
0.449	0.562	AIF1L
−0.114	−0.149	KLK6
−0.588	−0.248	FA2H
0.713	0.178	MAGI2-IT1
0.359	0.382	NTNG1
−0.276		ARC
0.314		C15orf27
	−0.156	FOXD1
0.252		ARHGEF3
0.374		PDE6B
		SORL1
		RFPL1
−0.167		RFPL2
	−0.184	ABLIM2
0.406		MPP5
0.331	0.310	RAPGEF3
0.391		TYRO3
0.147		TMCC3
−0.466	−0.134	CST2
		PNKD
		RIC3
	0.290	ENPP5
	0.259	FAAH

[Fetal kidney](normalized)	[Kidney](normalized)	Gene symbol
0.133		FRMD3
		GNG13
		FUT1
0.393	0.290	SYNPO
0.334	0.195	NRIP2
2.000	0.487	FOXD2
		CARD6
		CD7
0.759	0.665	SOST
0.369	0.236	CCBL1
0.361	0.123	BMP7
0.547	0.407	STON2
0.226		DPPA2
0.147	0.114	SYTL1
0.298	0.177	GPR62
0.212	0.108	ZMIZ1-AS1
0.230	0.162	TRADD
0.372	0.323	FOXC2
0.248	0.224	DHRS2
0.126	0.146	TPK1
0.110	0.438	FOXL1
0.218	0.123	LOC284080
0.282	0.201	CLDN5
0.324	0.257	CRB2
0.231	0.188	ATOH7
0.216	0.251	SECTM1
0.248	0.245	DRD4
0.240	0.183	TBXA2R
0.327		MMP23B
0.267	0.162	DNAJB13
0.280	0.263	ADAMTSL4
	0.109	SLAMF8
		GFRA3
0.187	0.108	PTGS1
		POU2AF1
0.189		LEFTY1
0.239		GPA33
0.156		KIRREL2
	−0.178	SLC16A1
		LINC01127
		RSPH10B
0.196		TSPAN2
0.701	0.226	TCF21
0.401	0.142	PLCE1
0.517	0.178	NPR1
0.376	0.119	TGFBR3
0.719		KIRREL
−0.140	−0.217	S100A4
−0.184	−0.417	GPR133
	−0.110	SDPR
	−0.127	OLFML2A
−0.281		GAS6
−0.199		ITIH5
	−0.205	CPZ
−0.703	−0.595	FAM129A

[Fetal kidney](normalized)	[Kidney](normalized)	Gene symbol
−0.169		SQRDL
	0.197	ST6GALNAC2
0.210		RAB11FIP1
0.171		MYO5C
0.644	0.511	PLA2R1
0.152	0.200	TSPAN8
	0.331	VAMP8
0.211	0.442	AQP3
0.146		KRT19P2
0.187	0.122	KRT19
		VAMP5
0.168		BST2
		ELF4
	−0.237	KLRB1
0.339	0.491	PLCG2
−0.375	−0.220	IL10RA
−0.332	−0.240	FAM46C
		LAMB3
		KIAA0040
		MFNG
0.215	0.501	GADD45A
−0.124		KRT4
−0.119	−0.145	TESC
	0.116	CCDC122
0.388	0.301	SBSPON
	−0.125	ZNF750
0.321	0.820	SFXN2
0.178		ZNF185
0.141	0.209	SPINT2
0.337	0.285	ITGA3
		SLC48A1
		SEMA3B
0.125	0.290	S100A2
0.171	0.106	EPS8L1
0.614	0.438	PODXL
		MYH3
1.021	0.817	NPHS1
		B3GALT4
		TFF3
0.314		MSLN
0.491		EMID1
0.156		MRGPRF
0.342	0.249	LAMA5
		RAMP1
0.110	0.286	TNFRSF8
0.169	0.106	RPH3AL
0.183	0.281	CRYGN
0.200	0.124	SEMA3G
		NOL3
0.283	0.249	GJA3
0.341	0.251	TMEM139
0.340	0.247	CARD10
		SLC51A

Supplementary Figure 5



Supplementary Table1

Genes common to iPS cell-derived podocytes *in vitro*, human glomeruli, and mouse podocytes *in vivo*

Continued gene list of Table 1 (fold induction: between 1.5 and 2.5)

Gene Symbol	Gene Name	iPS-derived podocytes	Human glomeruli	Mouse podocytes
BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2	2.48	2.21	3.41
ITM2C	Integral membrane protein 2C	2.41	1.52	2.11
COL4A4	Collagen, type IV, alpha 4	2.40	1.60	4.42
ACTN4	Actinin, alpha 4	2.39	1.96	3.48
ITGAV	Integrin, alpha V	2.39	4.59	3.16
NFE2L1	Nuclear factor, erythroid 2-like 1	2.35	1.99	3.22
GSN	Gelsolin	2.34	3.13	2.62
ARHGEF18	Rho/Rac guanine nucleotide exchange factor (GEF) 18	2.34	2.07	3.17
VAMP2	Vesicle-associated membrane protein 2 (synaptobrevin 2)	2.32	1.79	5.21
GSN	gelsolin	2.28	3.13	2.62
AXL	AXL receptor tyrosine kinase	2.27	5.74	2.82
CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1	2.21	4.53	2.56
NOMO1	NODAL modulator 1	2.13	1.99	1.55
AHNAK	AHNAK nucleoprotein	2.13	5.70	2.26
USP9X	Ubiquitin specific peptidase 9, X-linked	2.11	2.19	1.76
OPTN	Optineurin	2.11	2.43	7.32
COL4A5	Collagen, type IV, alpha 5	2.06	11.05	2.51
SYNPO	Synaptopodin	2.06	19.26	7.40
TENC1	Tensin like C1 domain containing phosphatase (tensin 2)	2.05	5.36	4.18
C1orf21	Chromosome 1 open reading frame 21	2.05	5.03	4.99
RECK	Reversion-inducing-cysteine-rich protein with kazal motifs	2.03	12.76	2.17
CAPN2	Calpain 2, (m/II) large subunit	2.00	3.57	2.21
ITGB5	Integrin, beta 5	1.99	3.46	6.75
RSRP1	Arginine/serine-rich protein 1	1.99	1.93	1.60
DOCK4	Dedicator of cytokinesis 4	1.98	5.68	11.99
ARHGEF17	Rho guanine nucleotide exchange factor (GEF) 17	1.97	1.74	2.30
ANXA2	Annexin A2	1.95	6.81	5.28
RAPGEF3	Rap guanine nucleotide exchange factor (GEF) 3	1.94	5.02	2.04
SULF1	Sulfatase 1	1.90	18.37	16.56
AEBP1	AE binding protein 1	1.90	1.58	3.16
SEPT2	Septin 2	1.87	2.14	2.88
GALC	Galactosylceramidase	1.86	4.65	2.48
TSC22D1	TSC22 domain family, member 1	1.85	2.28	1.66
PDIA6	Protein disulfide isomerase family A, member 6	1.84	1.58	1.78
FAT1	FAT atypical cadherin 1	1.84	3.64	5.05
YIPF6	Yip1 domain family, member 6	1.82	2.56	1.54
ARNT2	Aryl-hydrocarbon receptor nuclear translocator 2	1.82	2.86	1.68
DCTD	dCMP deaminase	1.81	3.18	3.21
PXDN	Peroxidasin homolog (Drosophila)	1.77	3.25	2.02
PXDN	Peroxidasin homolog (Drosophila)	1.75	3.25	2.02
CBLB	Cbl proto-oncogene B, E3 ubiquitin protein ligase	1.74	7.80	9.30
MXD4	MAX dimerization protein 4	1.74	1.52	1.75
RCAN1	Regulator of calcineurin 1	1.73	1.98	1.53
ARAF	v-raf murine sarcoma 3611 viral oncogene homolog	1.71	1.87	2.10
HLA-F	Major histocompatibility complex, class I, F	1.70	1.98	1.83
BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2	1.70	2.21	3.41
CREB3L2	cAMP responsive element binding protein 3-like 2	1.69	3.00	3.05
ARL1	ADP-ribosylation factor-like 1	1.69	1.93	1.55
BCL2	B-cell CLL/lymphoma 2	1.68	1.64	1.73
VAMP3	Vesicle-associated membrane protein 3	1.67	1.79	2.26
KRCC1	Lysine-rich coiled-coil 1	1.65	2.09	1.51
ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	1.64	2.45	3.28
TUBB2A	Tubulin, beta 2A class IIa	1.64	2.16	1.99
IQGAP1	IQ motif containing GTPase activating protein 1	1.62	2.43	2.07
MXD4	MAX dimerization protein 4	1.62	1.52	1.75
MAN1A2	Mannosidase, alpha, class 1A, member 2	1.61	1.71	4.86
CETN3	Centrin, EF-hand protein, 3	1.60	2.98	1.54
CREBL2	cAMP responsive element binding protein-like 2	1.60	1.60	1.77
CPQ	carboxypeptidase Q	1.59	2.09	3.22

BCL2	B-cell CLL/lymphoma 2	1.59	1.64	1.73
MAN1A2	Mannosidase, alpha, class 1A, member 2	1.59	1.71	4.86
BTBD1	BTB (POZ) domain containing 1	1.57	2.87	1.51
HOXA9	Homeobox A9	1.56	2.12	1.53
KTN1	kinectin 1 (kinesin receptor)	1.54	1.65	1.65
IQGAP2	IQ motif containing GTPase activating protein 2	1.53	2.50	3.67
VAMP3	vesicle-associated membrane protein 3	1.52	1.79	2.26
OSBPL9	oxysterol binding protein-like 9	1.52	2.30	1.57

Supplementary Table 2
Genes enriched in human podocytes *in vitro* and adult human glomeruli *in vivo*

Gene Symbol	Gene Name	iPS-derived podocytes	Human glomeruli
CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	131.10	41.99
SLAMF8	SLAM family member 8	103.02	1.55
FGF1	fibroblast growth factor 1 (acidic)	94.31	13.72
SQRDL	sulfide quinone reductase-like (yeast)	70.11	3.28
FAM134B	family with sequence similarity 134, member B	62.00	1.58
ITIH5	inter-alpha-trypsin inhibitor heavy chain family, member 5	34.25	8.22
IL1R1	interleukin 1 receptor, type I	32.61	1.91
SPOCK2	sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 2	31.60	11.92
GPRC5A	G protein-coupled receptor, class C, group 5, member A	30.79	8.54
PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	28.85	1.53
IL1R1	interleukin 1 receptor, type I	27.24	1.91
SLC48A1	solute carrier family 48 (heme transporter), member 1	27.22	4.07
BST2	bone marrow stromal cell antigen 2	26.22	11.36
PPFIA4	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 4	26.20	4.98
FRY	furry homolog (Drosophila)	25.60	14.14
KLK6	kallikrein-related peptidase 6	24.70	22.43
ITGB3	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	24.05	3.92
PLA2R1	phospholipase A2 receptor 1, 180kDa	23.25	11.32
AIF1	allograft inflammatory factor 1	23.06	6.97
SERINC5	serine incorporator 5	22.21	4.80
BST2	bone marrow stromal cell antigen 2	22.01	11.36
FRY	furry homolog (Drosophila)	21.47	14.14
NEBL	nebulette	20.26	9.40
KLK6	kallikrein-related peptidase 6	20.23	22.43
ARHGEF3	Rho guanine nucleotide exchange factor (GEF) 3	19.78	9.53
TBXA2R	thromboxane A2 receptor	18.69	2.47
SEMA3B	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B	17.53	6.13
FRY	furry homolog (Drosophila)	17.33	14.14
GAS6	growth arrest-specific 6	17.11	3.17
NEBL	nebulette	16.74	9.40
SLC48A1	solute carrier family 48 (heme transporter), member 1	16.59	4.07
TNNT2	troponin T type 2 (cardiac)	15.54	26.37
TPPP3	tubulin polymerization-promoting protein family member 3	15.48	23.31
RAMP1	receptor (G protein-coupled) activity modifying protein 1	15.07	2.27
CCBL1	cysteine conjugate-beta lyase, cytoplasmic	14.59	2.75
RAMP1	receptor (G protein-coupled) activity modifying protein 1	13.96	2.27
WT1-AS	WT1 antisense RNA	11.98	2.63
S100A4	S100 calcium binding protein A4	11.88	4.45
SPINT2	serine peptidase inhibitor, Kunitz type, 2	11.76	1.53
KLK7	kallikrein-related peptidase 7	11.63	10.70
SORL1	sortilin-related receptor, L(DLR class) A repeats containing	11.48	1.93
CARD10	caspase recruitment domain family, member 10	11.02	2.08
BMP7	bone morphogenetic protein 7	10.78	7.13
MYO5C	myosin VC	10.25	3.86
PDE4DIP	phosphodiesterase 4D interacting protein	10.24	5.55
NOL3	nucleolar protein 3 (apoptosis repressor with CARD domain)	10.14	2.03
OLFML2A	olfactomedin-like 2A	10.02	5.78
PPP2R2B	protein phosphatase 2, regulatory subunit B, beta	9.39	3.37
B3GALT4	UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, polypeptide 4	8.98	2.37
BMP7	bone morphogenetic protein 7	8.87	7.13
TPK1	thiamin pyrophosphokinase 1	8.78	2.56
ENPP4	ectonucleotide pyrophosphatase/phosphodiesterase 4 (putative)	8.75	1.92
KIAA0040	KIAA0040	8.61	3.59
NRIP2	nuclear receptor interacting protein 2	8.55	7.45
PDE4DIP	phosphodiesterase 4D interacting protein	8.54	5.55
TNNI1	troponin I type 1 (skeletal, slow)	8.52	11.29
ZNF185	zinc finger protein 185 (LIM domain)	8.39	7.27
TYRO3	TYRO3 protein tyrosine kinase	8.27	5.94
SLC27A3	solute carrier family 27 (fatty acid transporter), member 3	7.49	2.72

PPM1H	protein phosphatase, Mg2+/Mn2+ dependent, 1H	7.48	1.50
CELSR2	cadherin, EGF LAG seven-pass G-type receptor 2	7.36	2.23
BMP7	bone morphogenetic protein 7	7.31	7.13
PIEZO1	piezo-type mechanosensitive ion channel component 1	7.21	6.31
DDR1	discoidin domain receptor tyrosine kinase 1	7.02	1.80
PON2	paraoxonase 2	7.02	3.69
PDE4DIP	phosphodiesterase 4D interacting protein	6.83	5.55
FRY	furry homolog (Drosophila)	6.81	14.14
CFH	complement factor H	6.58	5.00
FRMD1	FERM domain containing 1	6.55	1.67
TBXAS1	thromboxane A synthase 1 (platelet)	6.49	2.77
KBTBD11	kelch repeat and BTB (POZ) domain containing 11	6.46	3.37
PLTP	phospholipid transfer protein	6.41	15.88
F3	coagulation factor III (thromboplastin, tissue factor)	6.34	8.00
DUSP1	dual specificity phosphatase 1	6.26	2.09
DSG2	desmoglein 2	6.23	1.67
NRGN	neurogranin (protein kinase C substrate, RC3)	6.20	1.80
CFH	complement factor H	6.20	5.00
LIMK2	LIM domain kinase 2	6.19	3.42
ARAP2	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2	6.11	3.35
KAT2B	K(lysine) acetyltransferase 2B	6.09	3.43
SPON2	spondin 2, extracellular matrix protein	6.09	1.74
GUCY1B3	guanylate cyclase 1, soluble, beta 3	5.98	3.20
LIMK2	LIM domain kinase 2	5.95	3.42
KCNH2	potassium voltage-gated channel, subfamily H (eag-related), member 2	5.92	2.16
SERPINB9	serpin peptidase inhibitor, clade B (ovalbumin), member 9	5.88	4.36
PTGDS	prostaglandin D2 synthase 21kDa (brain)	5.82	15.98
HOXD1	homeobox D1	5.81	2.02
PDE4DIP	phosphodiesterase 4D interacting protein	5.75	5.55
KCNH2	potassium voltage-gated channel, subfamily H (eag-related), member 2	5.71	2.16
PCOLCE2	procollagen C-endopeptidase enhancer 2	5.68	38.10
DUSP5	dual specificity phosphatase 5	5.59	2.31
GUCY1B3	guanylate cyclase 1, soluble, beta 3	5.56	3.20
OSTM1	osteopetrosis associated transmembrane protein 1	5.55	1.52
CFH	complement factor H	5.22	5.00
MAN2A2	mannosidase, alpha, class 2A, member 2	5.22	2.06
BAIAP2	BAI1-associated protein 2	5.09	1.85
TGFBR2	transforming growth factor, beta receptor II (70/80kDa)	5.06	6.26
NOTCH2NL	notch 2 N-terminal like	5.06	1.78
PDE4DIP	phosphodiesterase 4D interacting protein	4.99	5.55
PPP2R5A	protein phosphatase 2, regulatory subunit B', alpha	4.85	1.79
CAND2	cullin-associated and neddylation-dissociated 2 (putative)	4.85	7.17
NOTCH2NL	notch 2 N-terminal like	4.78	1.78
SYNGR2	synaptogyrin 2	4.71	1.57
DCAF8	DDB1 and CUL4 associated factor 8	4.63	2.70
CAPRIN2	caprin family member 2	4.62	1.73
SMAD6	SMAD family member 6	4.60	7.97
NOTCH2	notch 2	4.57	4.06
CA10	carbonic anhydrase X	4.53	14.80
CAPRIN2	caprin family member 2	4.52	1.73
ADORA1	adenosine A1 receptor	4.42	3.40
SYNGR2	synaptogyrin 2	4.42	1.57
DYNLT3	dynein, light chain, Tctex-type 3	4.35	1.67
STON1	stonin 1	4.32	5.99
VWA1	von Willebrand factor A domain containing 1	4.28	1.94
RPS6KA2	ribosomal protein S6 kinase, 90kDa, polypeptide 2	4.21	4.81
SHROOM2	shroom family member 2	4.20	3.12
PVRL2	poliovirus receptor-related 2 (herpesvirus entry mediator B)	4.08	4.82
MANSC1	MANSC domain containing 1	4.07	4.85
SULT1A2	sulfotransferase family, cytosolic, 1A, phenol-preferring, member 2	4.02	2.23
CHST2	carbohydrate (N-acetylglucosamine-6-O) sulfotransferase 2	4.01	3.11
SNCA	synuclein, alpha (non A4 component of amyloid precursor)	4.00	4.90
ATP2C1	ATPase, Ca++ transporting, type 2C, member 1	3.99	1.95
TPD52	tumor protein D52	3.97	1.90
CD9	CD9 molecule	3.94	2.47
AGRN	agrin	3.93	4.43
JMJD7	jumonji domain containing 7	3.91	2.12
SULT1A4	sulfotransferase family, cytosolic, 1A, phenol-preferring, member 4	3.87	1.93

SORT1	sortilin 1	3.87	2.37
GALNT2	polypeptide N-acetylgalactosaminyltransferase 2	3.85	1.93
PAMR1	peptidase domain containing associated with muscle regeneration 1	3.84	7.28
SLC29A1	solute carrier family 29 (equilibrative nucleoside transporter), member 1	3.82	2.01
SEMA3C	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C	3.82	2.79
RASSF7	Ras association (RalGDS/AF-6) domain family (N-terminal) member 7	3.69	1.51
TRIM37	tripartite motif containing 37	3.69	2.03
PVRL2	poliovirus receptor-related 2 (herpesvirus entry mediator B)	3.68	4.82
TMCO3	transmembrane and coiled-coil domains 3	3.58	2.58
P4HTM	prolyl 4-hydroxylase, transmembrane (endoplasmic reticulum)	3.58	2.02
LRP10	low density lipoprotein receptor-related protein 10	3.56	2.21
IRF1	interferon regulatory factor 1	3.54	2.01
TRIM37	tripartite motif containing 37	3.42	2.03
PLEKHG3	pleckstrin homology domain containing, family G (with Rho Gef domain) member 3	3.42	1.64
CTSD	cathepsin D	3.38	1.63
DCAF8	DDB1 and CUL4 associated factor 8	3.37	2.70
LMO2	LIM domain only 2 (rhombotin-like 1)	3.36	3.18
REEP5	receptor accessory protein 5	3.36	1.82
PLEKHG3	pleckstrin homology domain containing, family G (with RhoGef domain) member 3	3.35	1.64
CALCOCO1	calcium binding and coiled-coil domain 1	3.33	2.12
TSPAN4	tetraspanin 4	3.32	2.11
SERPINB1	serpin peptidase inhibitor, clade B (ovalbumin), member 1	3.31	2.07
C1QL1	complement component 1, q subcomponent-like 1	3.30	1.50
PLXNB2	plexin B2	3.29	1.65
ETHE1	ethylmalonic encephalopathy 1	3.29	3.00
RBPMS	RNA binding protein with multiple splicing	3.27	2.73
JUP	junction plakoglobin	3.26	1.89
DKK3	dickkopf WNT signaling pathway inhibitor 3	3.25	6.23
AMOTL2	angiomotin like 2	3.24	2.18
CCPG1	cell cycle progression 1	3.24	2.25
CDC42EP2	CDC42 effector protein (Rho GTPase binding) 2	3.24	2.80
MAPK10	mitogen-activated protein kinase 10	3.23	1.55
EFEMP1	EGF containing fibulin-like extracellular matrix protein 1	3.22	5.11
TSPAN4	tetraspanin 4	3.21	2.11
SEPT8	septin 8	3.19	3.16
SLC38A10	solute carrier family 38, member 10	3.16	1.62
GMDS	GDP-mannose 4,6-dehydratase	3.14	7.25
PLXND1	plexin D1	3.12	2.52
PLXNB2	plexin B2	3.11	1.65
B9D1	B9 protein domain 1	3.11	1.70
CAST	calpastatin	3.08	2.37
SGSH	N-sulfoglucosamine sulfohydrolase	3.08	3.08
DUSP14	dual specificity phosphatase 14	3.08	4.99
TMEM80	transmembrane protein 80	3.06	2.14
TRAPPC10	trafficking protein particle complex 10	3.04	2.37
EFNB2	ephrin-B2	3.03	12.12
PSEN2	presenilin 2	3.02	2.82
LBH	limb bud and heart development	3.01	3.88
BGN	biglycan	3.01	6.14
CLEC16A	C-type lectin domain family 16, member A	2.99	1.80
ABCA3	ATP-binding cassette, sub-family A (ABC1), member 3	2.98	2.57
N4BP2L2	NEDD4 binding protein 2-like 2	2.98	2.20
PLA2G15	phospholipase A2, group XV	2.95	1.72
MYL9	myosin, light chain 9, regulatory	2.93	22.66
DYNLT3	dynein, light chain, Tctex-type 3	2.91	1.67
WASF3	WAS protein family, member 3	2.89	2.62
B9D1	B9 protein domain 1	2.88	1.70
PXDC1	PX domain containing 1	2.86	1.75
MID2	midline 2	2.85	2.42
LAMP2	lysosomal-associated membrane protein 2	2.83	2.41
STAT1	signal transducer and activator of transcription 1, 91kDa	2.83	3.37
DDX17	DEAD (Asp-Glu-Ala-Asp) box helicase 17	2.79	1.53
PLEC	plectin	2.79	1.94
NACC2	NACC family member 2, BEN and BTB (POZ) domain containing	2.79	4.93
GGCX	gamma-glutamyl carboxylase	2.78	1.78

ANGPTL4	angiopoietin-like 4	2.75	2.43
SPATA20	spermatogenesis associated 20	2.74	1.92
LYST	lysosomal trafficking regulator	2.73	3.39
STX7	syntaxin 7	2.72	2.02
NDNF	neuron-derived neurotrophic factor	2.72	26.53
NOTCH2	notch 2	2.71	4.06
SUCO	SUN domain containing ossification factor	2.69	3.01
LGR4	leucine-rich repeat containing G protein-coupled receptor 4	2.68	1.65
CAST	calpastatin	2.66	2.37
IL4R	interleukin 4 receptor	2.66	2.27
STX7	syntaxin 7	2.66	2.02
ATP6AP1	ATPase, H+ transporting, lysosomal accessory protein 1	2.65	2.15
ADCK2	aarF domain containing kinase 2	2.65	1.94
NPEPL1	aminopeptidase-like 1	2.64	1.68
LOXL1	lysyl oxidase-like 1	2.63	10.88
NCSTN	nicastrin	2.61	2.21
ARPC5	actin related protein 2/3 complex, subunit 5, 16kDa	2.60	1.89
ZDHHC6	zinc finger, DHHC-type containing 6	2.59	9.80
BAIAP2	BAI1-associated protein 2	2.59	1.85
STXBP3	syntaxin binding protein 3	2.59	1.60
BAIAP2	BAI1-associated protein 2	2.59	1.85
LGALS8	lectin, galactoside-binding, soluble, 8	2.59	4.52
TSC22D3	TSC22 domain family, member 3	2.58	4.51
CLSTN1	calsyntenin 1	2.57	1.64
MYL4	myosin, light chain 4, alkali; atrial, embryonic	2.57	1.63
CD46	CD46 molecule, complement regulatory protein	2.55	1.56
NPTN	neuroplastin	2.54	1.51
B3GNT1	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 1	2.54	3.62
PPAP2B	phosphatidic acid phosphatase type 2B	2.53	2.31
GULP1	GULP, engulfment adaptor PTB domain containing 1	2.52	4.75
CDC25B	cell division cycle 25B	2.52	2.83
TDRD7	tudor domain containing 7	2.52	2.45
GULP1	GULP, engulfment adaptor PTB domain containing 1	2.51	4.75
NPTN	neuroplastin	2.49	1.51
TXNIP	thioredoxin interacting protein	2.48	2.05
AACS	acetoacetyl-CoA synthetase	2.47	1.65
ACYP2	acylphosphatase 2, muscle type	2.47	1.98
AACS	acetoacetyl-CoA synthetase	2.47	1.65
HK2	hexokinase 2	2.45	5.03
CDKN1B	cyclin-dependent kinase inhibitor 1B (p27, Kip1)	2.45	4.06
NPEPL1	aminopeptidase-like 1	2.44	1.68
DENND3	DENN/MADD domain containing 3	2.44	1.68
VPS8	vacuolar protein sorting 8 homolog (S. cerevisiae)	2.41	1.87
CITED2	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2	2.40	2.71
YPEL5	yippee-like 5 (Drosophila)	2.40	1.77
ARF3	ADP-ribosylation factor 3	2.40	2.14
KIAA1598	KIAA1598	2.40	2.01
CASP9	caspase 9, apoptosis-related cysteine peptidase	2.39	1.74
CDIPT	CDP-diacylglycerol--inositol 3-phosphatidyltransferase	2.37	1.69
TM9SF1	transmembrane 9 superfamily member 1	2.36	2.01
EPHA2	EPH receptor A2	2.35	1.92
CITED2	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2	2.34	2.71
NDRG2	NDRG family member 2	2.34	5.75
NRIP1	nuclear receptor interacting protein 1	2.34	1.89
LAMP2	lysosomal-associated membrane protein 2	2.33	2.41
CDKN1B	cyclin-dependent kinase inhibitor 1B (p27, Kip1)	2.33	4.06
C1GALT1C1	C1GALT1-specific chaperone 1	2.33	1.78
PSAP	prosaposin	2.32	1.57
ATP13A3	ATPase type 13A3	2.31	1.69
FXYD1	FXYD domain containing ion transport regulator 1	2.31	2.33
ERBB4	v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 4	2.29	3.94
PSAP	prosaposin	2.29	1.57
MBD2	methyl-CpG binding domain protein 2	2.29	1.65
VPS13C	vacuolar protein sorting 13 homolog C (S. cerevisiae)	2.29	2.12
RNF6	ring finger protein (C3H2C3 type) 6	2.27	1.65
TACC1	transforming, acidic coiled-coil containing protein 1	2.26	1.77
ZSCAN18	zinc finger and SCAN domain containing 18	2.26	2.48
MOAP1	modulator of apoptosis 1	2.26	1.75

CHFR	checkpoint with forkhead and ring finger domains, E3 ubiquitin protein ligase	2.26	1.63
ATXN1	ataxin 1	2.26	2.77
PPFIA1	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 1	2.25	2.38
TMEM9B	TMEM9 domain family, member B	2.25	2.38
IQSEC1	IQ motif and Sec7 domain 1	2.23	2.79
PDLIM1	PDZ and LIM domain 1	2.23	2.54
RNASET2	ribonuclease T2	2.22	1.83
GRN	granulin	2.22	1.69
ZHX2	zinc fingers and homeoboxes 2	2.21	1.79
HLA-DMA	major histocompatibility complex, class II, DM alpha	2.19	2.64
IFI16	interferon, gamma-inducible protein 16	2.19	4.37
LGALS3BP	lectin, galactoside-binding, soluble, 3 binding protein	2.19	3.29
TRAPPC10	trafficking protein particle complex 10	2.18	2.37
WBP2	WW domain binding protein 2	2.17	1.65
SIPA1L1	signal-induced proliferation-associated 1 like 1	2.17	1.61
CBX7	chromobox homolog 7	2.17	3.39
EFR3A	EFR3 homolog A (S. cerevisiae)	2.17	1.52
NDRG2	NDRG family member 2	2.16	5.75
MED15	mediator complex subunit 15	2.16	1.55
PRDX6	peroxiredoxin 6	2.16	1.60
C9orf3	chromosome 9 open reading frame 3	2.15	2.53
NBPF10	neuroblastoma breakpoint family, member 10	2.14	3.15
PTPN13	protein tyrosine phosphatase, non-receptor type 13 (APO-1/CD95 (Fas)-associated phosphatase)	2.13	3.72
RCHY1	ring finger and CHY zinc finger domain containing 1, E3 ubiquitin protein ligase	2.13	1.69
ANKRD28	ankyrin repeat domain 28	2.11	2.88
WWC3	WWC family member 3	2.11	3.93
CD200	CD200 molecule	2.10	8.82
KDM7A	lysine (K)-specific demethylase 7A	2.10	2.10
SH3BP5	SH3-domain binding protein 5 (BTK-associated)	2.10	1.74
SUN1	Sad1 and UNC84 domain containing 1	2.09	2.94
ABR	active BCR-related	2.07	2.30
GABARAPL2	GABA(A) receptor-associated protein-like 2	2.07	1.63
RNASET2	ribonuclease T2	2.07	1.83
STAT6	signal transducer and activator of transcription 6, interleukin-4 induced	2.06	1.52
CBX6	chromobox homolog 6	2.06	1.82
OBFC1	oligonucleotide/oligosaccharide-binding fold containing 1	2.06	3.18
MPPE1	metallophosphoesterase 1	2.05	2.00
GOLGA1	golgin A1	2.05	1.61
SIDT2	SID1 transmembrane family, member 2	2.04	1.96
BBS1	Bardet-Biedl syndrome 1	2.04	1.59
TBC1D5	TBC1 domain family, member 5	2.04	1.59
PTPMT1	protein tyrosine phosphatase, mitochondrial 1	2.04	1.68
NRIP1	nuclear receptor interacting protein 1	2.03	1.89
HLA-DMA	major histocompatibility complex, class II, DM alpha	2.02	2.64
RHEB	Ras homolog enriched in brain	2.01	2.04
CD200	CD200 molecule	2.01	8.82
IER5	immediate early response 5	2.01	3.79
CUL3	cullin 3	2.01	2.26
PC	pyruvate carboxylase	2.00	1.74
DCAF6	DDB1 and CUL4 associated factor 6	2.00	1.93
RNF38	ring finger protein 38	2.00	2.61
SIK3	SIK family kinase 3	2.00	1.98
ATP13A3	ATPase type 13A3	2.00	1.69
CRELD1	cysteine-rich with EGF-like domains 1	2.00	3.14
ADO	2-aminoethanethiol (cysteamine) dioxygenase	2.00	2.36
HEY1	hes-related family bHLH transcription factor with YRPW motif 1	2.00	1.97
C10orf10	chromosome 10 open reading frame 10	1.99	2.38
APPBP2	amyloid beta precursor protein (cytoplasmic tail) binding protein 2	1.97	2.19
GLTSCR1L	GLTSCR1-like	1.97	2.02
TM2D1	TM2 domain containing 1	1.96	3.50
TMEM50A	transmembrane protein 50A	1.95	2.08
SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1	1.95	2.37
ARHGEF10	Rho guanine nucleotide exchange factor (GEF) 10	1.95	4.76
DNAJB2	DnaJ (Hsp40) homolog, subfamily B, member 2	1.95	1.84

PLD3	phospholipase D family, member 3	1.94	3.30
CLTB	clathrin, light chain B	1.93	1.72
TACC2	transforming, acidic coiled-coil containing protein 2	1.92	3.80
LIMS2	LIM and senescent cell antigen-like domains 2	1.92	2.39
SENP6	SUMO1/sentrin specific peptidase 6	1.92	1.72
SYNJ2	synaptojanin 2	1.92	11.16
DST	dystonin	1.92	3.78
UBXN2B	UBX domain protein 2B	1.92	1.64
ID4	inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	1.91	3.84
TM2D1	TM2 domain containing 1	1.91	3.50
EFCAB14	EF-hand calcium binding domain 14	1.91	1.67
BACE1	beta-site APP-cleaving enzyme 1	1.90	4.22
PNMAL1	paraneoplastic Ma antigen family-like 1	1.90	4.44
MPPE1	metallophosphoesterase 1	1.89	2.00
RNF103	ring finger protein 103	1.89	2.11
SAP18	Sin3A-associated protein, 18kDa	1.89	2.55
IKBKB	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta	1.89	2.89
HLA-A	major histocompatibility complex, class I, A	1.89	1.92
OBSL1	obscurin-like 1	1.88	2.95
OTUD4	OTU deubiquitinase 4	1.88	2.07
EMC1	ER membrane protein complex subunit 1	1.87	1.65
SUN1	Sad1 and UNC84 domain containing 1	1.87	2.94
ENDOD1	endonuclease domain containing 1	1.86	3.18
TXNDC15	thioredoxin domain containing 15	1.86	1.70
CLIP3	CAP-GLY domain containing linker protein 3	1.86	4.11
MBOAT7	membrane bound O-acyltransferase domain containing 7	1.85	1.71
CYLD	cylindromatosis (turban tumor syndrome)	1.85	2.06
IFT122	intraflagellar transport 122 homolog (Chlamydomonas)	1.85	1.68
YPEL5	yippee-like 5 (Drosophila)	1.85	1.77
PERP	PERP, TP53 apoptosis effector	1.85	1.88
UNC50	unc-50 homolog (C. elegans)	1.84	1.84
RALGAPA1	Ral GTPase activating protein, alpha subunit 1 (catalytic)	1.84	2.67
ACSL3	acyl-CoA synthetase long-chain family member 3	1.84	2.30
SLC35A5	solute carrier family 35, member A5	1.83	1.77
SNX1	sorting nexin 1	1.82	4.24
TFE3	transcription factor binding to IGHM enhancer 3	1.82	2.48
LANCL1	LanC lantibiotic synthetase component C-like 1 (bacterial)	1.82	3.64
RABGAP1L	RAB GTPase activating protein 1-like	1.82	3.73
UGGT2	UDP-glucose glycoprotein glucosyltransferase 2	1.81	3.76
PCMT1	protein-L-isoaspartate (D-aspartate) O-methyltransferase	1.81	2.68
KIAA0195	KIAA0195	1.81	1.57
ZNF24	zinc finger protein 24	1.81	1.86
TMCO3	transmembrane and coiled-coil domains 3	1.81	2.58
HLA-A	major histocompatibility complex, class I, A	1.81	1.92
MAP1LC3B	microtubule-associated protein 1 light chain 3 beta	1.80	1.54
ZC3H14	zinc finger CCCH-type containing 14	1.80	1.63
TMED3	transmembrane emp24 protein transport domain containing 3	1.80	3.97
ANXA11	annexin A11	1.80	1.94
TBC1D22A	TBC1 domain family, member 22A	1.80	1.65
VPS54	vacuolar protein sorting 54 homolog (S. cerevisiae)	1.79	1.66
WWOX	WW domain containing oxidoreductase	1.78	2.49
UVRAG	UV radiation resistance associated	1.78	2.17
APMAP	adipocyte plasma membrane associated protein	1.78	3.03
SNX6	sorting nexin 6	1.77	2.73
RASIP1	Ras interacting protein 1	1.77	1.60
LARP4B	La ribonucleoprotein domain family, member 4B	1.77	1.69
HLA-G	major histocompatibility complex, class I, G	1.77	1.57
HIST1H2BK	histone cluster 1, H2bk	1.77	8.91
MAP1LC3B	microtubule-associated protein 1 light chain 3 beta	1.76	1.54
TOR1AIP1	torsin A interacting protein 1	1.76	1.78
MAP2K4	mitogen-activated protein kinase kinase 4	1.76	1.58
CRIP2	cysteine-rich protein 2	1.76	4.82
VPS16	vacuolar protein sorting 16 homolog (S. cerevisiae)	1.76	1.54
CTSV	cathepsin V	1.75	2.06
ADAM17	ADAM metallopeptidase domain 17	1.75	2.42
PTPRA	protein tyrosine phosphatase, receptor type, A	1.75	3.10
ATF1	activating transcription factor 1	1.75	1.61
BACE1	beta-site APP-cleaving enzyme 1	1.75	4.22
IDE	insulin-degrading enzyme	1.74	1.57

PALLD	palladin, cytoskeletal associated protein	1.74	3.08
INSIG2	insulin induced gene 2	1.74	1.77
ZNF451	zinc finger protein 451	1.74	2.52
PCMT1	protein-L-isoaspartate (D-aspartate) O-methyltransferase	1.74	2.68
ATP9B	ATPase, class II, type 9B	1.73	1.55
PVR	poliovirus receptor	1.73	3.29
MEF2A	myocyte enhancer factor 2A	1.73	2.00
COLGALT2	collagen beta(1-O)galactosyltransferase 2	1.73	4.06
ELF1	E74-like factor 1 (ets domain transcription factor)	1.73	2.57
CTSO	cathepsin O	1.73	2.72
SENP6	SUMO1/sentrin specific peptidase 6	1.72	1.72
PPFIA1	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 1	1.72	2.38
RAD23B	RAD23 homolog B (S. cerevisiae)	1.72	1.72
PIGG	phosphatidylinositol glycan anchor biosynthesis, class G	1.72	2.03
PIK3R4	phosphoinositide-3-kinase, regulatory subunit 4	1.71	1.99
HGSNAT	heparan-alpha-glucosaminide N-acetyltransferase	1.71	2.09
METTL3	methyltransferase like 3	1.71	2.46
UBE3C	ubiquitin protein ligase E3C	1.71	1.77
TMEM87A	transmembrane protein 87A	1.71	1.89
H1F0	H1 histone family, member 0	1.71	3.44
COL4A6	collagen, type IV, alpha 6	1.71	2.41
SLC24A1	solute carrier family 24 (sodium/potassium/calcium exchanger), member 1	1.70	2.11
RAD23B	RAD23 homolog B (S. cerevisiae)	1.70	1.72
DMD	dystrophin	1.70	5.23
XPOT	exportin, tRNA	1.69	2.84
FAXDC2	fatty acid hydroxylase domain containing 2	1.69	1.83
PRDM4	PR domain containing 4	1.69	1.54
PCMT1	protein-L-isoaspartate (D-aspartate) O-methyltransferase	1.69	2.68
BEX4	brain expressed, X-linked 4	1.69	2.91
RPN2	ribophorin II	1.68	1.60
APOL2	apolipoprotein L, 2	1.68	1.72
GSTA4	glutathione S-transferase alpha 4	1.68	2.67
IP6K2	inositol hexakisphosphate kinase 2	1.68	3.91
GAS1	growth arrest-specific 1	1.68	9.85
SNX6	sorting nexin 6	1.68	2.73
SNX19	sorting nexin 19	1.68	2.24
MKRN1	makorin ring finger protein 1	1.67	1.65
FBXL2	F-box and leucine-rich repeat protein 2	1.67	1.99
ERAP1	endoplasmic reticulum aminopeptidase 1	1.67	1.90
FAM208A	family with sequence similarity 208, member A	1.67	3.24
TCF25	transcription factor 25 (basic helix-loop-helix)	1.66	1.52
TRAPPC12	trafficking protein particle complex 12	1.66	1.57
TCTN3	tectonic family member 3	1.66	1.63
MKRN2	makorin ring finger protein 2	1.66	2.50
BACE1	beta-site APP-cleaving enzyme 1	1.66	4.22
PHF11	PHD finger protein 11	1.66	3.03
MBTPS1	membrane-bound transcription factor peptidase, site 1	1.65	2.11
TSC2	tuberous sclerosis 2	1.65	2.56
CLN5	ceroid-lipofuscinosis, neuronal 5	1.65	2.07
USO1	USO1 vesicle transport factor	1.64	1.87
RANGAP1	Ran GTPase activating protein 1	1.64	1.99
SALL2	spalt-like transcription factor 2	1.64	2.22
SNED1	sushi, nidogen and EGF-like domains 1	1.64	1.58
NOTCH2NL	notch 2 N-terminal like	1.64	1.78
EMC2	ER membrane protein complex subunit 2	1.64	2.11
VPS52	vacuolar protein sorting 52 homolog (S. cerevisiae)	1.64	1.82
BCAR3	breast cancer anti-estrogen resistance 3	1.63	2.80
THADA	thyroid adenoma associated	1.63	1.54
MBTPS1	membrane-bound transcription factor peptidase, site 1	1.63	2.11
NPC1	Niemann-Pick disease, type C1	1.63	2.99
BCL2L2	BCL2-like 2	1.63	2.29
TMEM189	transmembrane protein 189	1.63	1.68
CDYL	chromodomain protein, Y-like	1.63	2.82
ZNF24	zinc finger protein 24	1.62	1.86
AGGF1	angiogenic factor with G patch and FHA domains 1	1.62	1.83
RGS10	regulator of G-protein signaling 10	1.62	5.42
VPS4B	vacuolar protein sorting 4 homolog B (S. cerevisiae)	1.61	2.37
PISD	phosphatidylserine decarboxylase	1.61	2.07

OVCA2	ovarian tumor suppressor candidate 2	1.61	1.77
KHNYN	KH and NYN domain containing	1.61	1.62
ELF1	E74-like factor 1 (ets domain transcription factor)	1.60	2.57
ASMTL	acetylserotonin O-methyltransferase-like	1.60	2.19
OBFC1	oligonucleotide/oligosaccharide-binding fold containing 1	1.60	3.18
LAMP2	lysosomal-associated membrane protein 2	1.60	2.41
MFAP3	microfibrillar-associated protein 3	1.60	1.84
NID2	nidogen 2 (osteonidogen)	1.60	1.62
PPP1R3D	protein phosphatase 1, regulatory subunit 3D	1.59	2.72
HS2ST1	heparan sulfate 2-O-sulfotransferase 1	1.59	1.77
ZNF274	zinc finger protein 274	1.59	1.92
ISYNA1	inositol-3-phosphate synthase 1	1.58	2.15
OSBPL2	oxysterol binding protein-like 2	1.58	2.03
C9orf156	chromosome 9 open reading frame 156	1.58	1.65
PAK2	p21 protein (Cdc42/Rac)-activated kinase 2	1.58	2.07
TULP4	tubby like protein 4	1.58	2.09
ISYNA1	inositol-3-phosphate synthase 1	1.58	2.15
MAN1B1	mannosidase, alpha, class 1B, member 1	1.58	1.60
ATRN	attractin	1.57	2.57
TPRA1	transmembrane protein, adipocyte asscociated 1	1.57	1.61
RDX	radixin	1.57	2.34
LARP4B	La ribonucleoprotein domain family, member 4B	1.57	1.69
KATNB1	katanin p80 (WD repeat containing) subunit B 1	1.57	1.65
ZBTB1	zinc finger and BTB domain containing 1	1.57	2.42
CHD7	chromodomain helicase DNA binding protein 7	1.57	2.68
HEG1	heart development protein with EGF-like domains 1	1.56	4.03
FYCO1	FYVE and coiled-coil domain containing 1	1.56	2.00
TMED10	transmembrane emp24-like trafficking protein 10 (yeast)	1.56	2.16
CHCHD7	coiled-coil-helix-coiled-coil-helix domain containing 7	1.56	2.15
CCSER2	coiled-coil serine-rich protein 2	1.56	2.41
GPR107	G protein-coupled receptor 107	1.56	1.84
TEX261	testis expressed 261	1.56	1.56
GTDC1	glycosyltransferase-like domain containing 1	1.56	2.18
SLC10A3	solute carrier family 10, member 3	1.55	2.27
PIGT	phosphatidylinositol glycan anchor biosynthesis, class T	1.55	2.19
HLA-DMB	major histocompatibility complex, class II, DM beta	1.55	1.83
SRF	serum response factor (c-fos serum response element-binding transcription factor)	1.55	1.99
C8orf33	chromosome 8 open reading frame 33	1.55	3.98
FAM13B	family with sequence similarity 13, member B	1.55	5.32
IQCE	IQ motif containing E	1.55	2.16
PARD3	par-3 family cell polarity regulator	1.54	5.43
PANK3	pantothenate kinase 3	1.54	1.63
RBM23	RNA binding motif protein 23	1.54	2.09
PANK3	pantothenate kinase 3	1.54	1.63
MOB4	MOB family member 4, phocein	1.53	1.97
SACM1L	SAC1 suppressor of actin mutations 1-like (yeast)	1.53	1.82
INPP5K	inositol polyphosphate-5-phosphatase K	1.53	1.84
ZNF609	zinc finger protein 609	1.53	1.60
SYS1	Sys1 golgi trafficking protein	1.53	2.08
CREM	cAMP responsive element modulator	1.52	2.09
TMEM66	transmembrane protein 66	1.52	1.52
EIF2AK1	eukaryotic translation initiation factor 2-alpha kinase 1	1.51	1.80
PALLD	palladin, cytoskeletal associated protein	1.51	3.08
PGAM1	phosphoglycerate mutase 1 (brain)	1.51	1.51
CHST12	carbohydrate (chondroitin 4) sulfotransferase 12	1.51	2.57
HNRNPH2	heterogeneous nuclear ribonucleoprotein H2 (H')	1.51	1.59
KIAA0247	KIAA0247	1.51	1.59
ERLIN2	ER lipid raft associated 2	1.51	1.55
FAM127B	family with sequence similarity 127, member B	1.50	2.00

Supplementary Table 3
Genes enriched in human podocytes *in vitro* and mouse podocytes *in vivo*

Gene Symbol	Gene Name	iPS-derived podocytes	Mouse podocytes
FA2H	fatty acid 2-hydroxylase	96.90	2.28
ENPEP	glutamylaminopeptidase (aminopeptidase A)	70.50	8.32
IL6R	interleukin 6 receptor	54.84	2.07
GJA3	gap junction protein, alpha 3, 46kDa	50.83	2.58
NPNT	nephronectin	38.77	5.96
TSPAN2	tetraspanin 2	27.98	25.56
CGNL1	cingulin-like 1	20.91	1.96
ZBTB7C	zinc finger and BTB domain containing 7C	18.81	2.64
FAM81A	family with sequence similarity 81, member A	18.67	3.25
GADD45A	growth arrest and DNA-damage-inducible, alpha	14.28	7.26
MMP23B	matrix metallopeptidase 23B	14.21	5.03
ADM	adrenomedullin	13.69	18.61
TMEM150C	transmembrane protein 150C	13.31	8.01
KIRREL	kin of IRRE like (Drosophila)	11.84	4.49
AIF1L	allograft inflammatory factor 1-like	10.81	4.33
FOXC2	forkhead box C2 (MFH-1, mesenchyme forkhead 1)	10.68	19.02
KIRREL	kin of IRRE like (Drosophila)	10.11	4.49
CTTNBP2	cortactin binding protein 2	8.88	3.21
ANXA3	annexin A3	8.79	4.73
AIF1L	allograft inflammatory factor 1-like	8.15	4.33
ST6GALNAC3	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 3	8.04	10.19
HS3ST6	heparan sulfate (glucosamine) 3-O-sulfotransferase 6	7.93	2.60
ROBO2	roundabout, axon guidance receptor, homolog 2 (Drosophila)	7.92	15.38
WIPF3	WAS/WASL interacting protein family, member 3	7.32	5.69
CDC14A	cell division cycle 14A	6.88	14.32
RASL11A	RAS-like, family 11, member A	6.46	9.22
EPB41L5	erythrocyte membrane protein band 4.1 like 5	6.43	3.16
HS3ST3B1	heparan sulfate (glucosamine) 3-O-sulfotransferase 3B1	6.33	2.23
SRGAP1	SLIT-ROBO Rho GTPase activating protein 1	6.06	24.97
PCED1B	PC-esterase domain containing 1B	5.83	3.22
SLC9A3R2	solute carrier family 9, subfamily A (NHE3, cation proton antiporter 3), member 3 regulator 2	5.58	2.98
PARD6B	par-6 family cell polarity regulator beta	5.57	1.88
SH3BGRL2	SH3 domain binding glutamate-rich protein like 2	5.16	3.65
MYLK	myosin light chain kinase	5.09	3.03
ARHGAP23	Rho GTPase activating protein 23	5.05	2.60
MYLK	myosin light chain kinase	5.03	3.03
EPHX1	epoxide hydrolase 1, microsomal (xenobiotic)	4.82	5.68
NOS1AP	nitric oxide synthase 1 (neuronal) adaptor protein	4.66	1.52
ST6GALNAC3	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 3	4.49	10.19
ACPP	acid phosphatase, prostate	4.46	11.09
EFNB1	ephrin-B1	4.23	4.93
RHPN1	rhophilin, Rho GTPase binding protein 1	4.17	3.31
ARHGEF16	Rho guanine nucleotide exchange factor (GEF) 16	4.15	2.35
LRRFIP1	leucine rich repeat (in FLII) interacting protein 1	4.06	4.90
ST3GAL1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1	4.03	9.85
IFNAR1	interferon (alpha, beta and omega) receptor 1	3.93	1.60
LRRFIP1	leucine rich repeat (in FLII) interacting protein 1	3.85	4.90
ARHGAP28	Rho GTPase activating protein 28	3.85	25.97
ARHGAP28	Rho GTPase activating protein 28	3.84	25.97
NRP1	neuropilin 1	3.70	1.94
C19orf33	chromosome 19 open reading frame 33	3.67	1.74
TSPAN12	tetraspanin 12	3.66	1.84
PLXNB1	plexin B1	3.60	3.07
BTG2	BTG family, member 2	3.60	3.34
SLC6A6	solute carrier family 6 (neurotransmitter transporter), member 6	3.58	1.56
EZR	ezrin	3.54	1.72
SEMA3F	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3F	3.53	1.72

DNAJB9	DnaJ (Hsp40) homolog, subfamily B, member 9	3.44	1.88
VASN	vasorin	3.41	2.97
FNDC3B	fibronectin type III domain containing 3B	3.40	4.62
UNC5C	unc-5 homolog C (C. elegans)	3.40	4.82
KREMEN1	kringle containing transmembrane protein 1	3.33	2.44
LATS2	large tumor suppressor kinase 2	3.30	4.00
KREMEN1	kringle containing transmembrane protein 1	3.25	2.44
DUSP3	dual specificity phosphatase 3	3.25	2.46
LRRFIP1	leucine rich repeat (in FLII) interacting protein 1	3.25	4.90
ABCA2	ATP-binding cassette, sub-family A (ABC1), member 2	3.24	2.49
METRNL	meteorin, glial cell differentiation regulator-like	3.20	1.96
TPCN1	two pore segment channel 1	3.16	1.56
MSI2	musashi RNA-binding protein 2	3.11	1.79
AKT2	v-akt murine thymoma viral oncogene homolog 2	3.02	1.74
ARHGAP24	Rho GTPase activating protein 24	3.01	3.05
MID1IP1	MID1 interacting protein 1	3.01	1.96
ST6GALNAC6	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 6	2.97	8.05
AIF1L	allograft inflammatory factor 1-like	2.95	4.33
TMEM245	transmembrane protein 245	2.94	2.01
COL18A1	collagen, type XVIII, alpha 1	2.93	1.96
UCP2	uncoupling protein 2 (mitochondrial, proton carrier)	2.93	1.52
ITM2B	integral membrane protein 2B	2.92	1.63
DLC1	deleted in liver cancer 1	2.88	2.67
RBMS1	RNA binding motif, single stranded interacting protein 1	2.86	2.63
LOXL3	lysyl oxidase-like 3	2.83	1.55
ITM2B	integral membrane protein 2B	2.82	1.63
GABPB2	GA binding protein transcription factor, beta subunit 2	2.79	2.02
DCDC2	doublecortin domain containing 2	2.77	4.52
GPC3	glypican 3	2.77	3.39
RBMS1	RNA binding motif, single stranded interacting protein 1	2.76	2.63
TANC1	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1	2.74	1.94
UACA	uvealautoantigen with coiled-coil domains and ankyrin repeats	2.70	8.09
TPCN1	two pore segment channel 1	2.69	1.56
LOXL3	lysyl oxidase-like 3	2.68	1.55
PLEKHG1	pleckstrin homology domain containing, family G (with Rho Gef domain) member 1	2.66	7.10
TRIM3	tripartite motif containing 3	2.64	1.81
PDE3A	phosphodiesterase 3A, cGMP-inhibited	2.60	2.65
TSPAN5	tetraspanin 5	2.59	4.40
RBMS1	RNA binding motif, single stranded interacting protein 1	2.57	2.63
DACH1	dachshund family transcription factor 1	2.56	10.33
RNF141	ring finger protein 141	2.55	1.50
TMBIM1	transmembrane BAX inhibitor motif containing 1	2.52	3.46
MBLAC2	metallo-beta-lactamase domain containing 2	2.49	2.12
FNDC3B	fibronectin type III domain containing 3B	2.47	4.62
GPC3	glypican 3	2.31	3.39
DACH1	dachshund family transcription factor 1	2.30	10.33
SYDE2	synapse defective 1, Rho GTPase, homolog 2 (C. elegans)	2.28	1.81
SBF2	SET binding factor 2	2.26	2.08
AMIGO1	adhesion molecule with Ig-like domain 1	2.23	1.63
MBNL2	muscleblind-like splicing regulator 2	2.22	2.12
ARMCX3	armadillo repeat containing, X-linked 3	2.19	2.29
CRYAB	crystallin, alpha B	2.18	1.79
SCARB2	scavenger receptor class B, member 2	2.13	1.64
CAB39	calcium binding protein 39	2.11	1.71
CMTM7	CKLF-like MARVEL transmembrane domain containing 7	2.09	7.01
GNPDA1	glucosamine-6-phosphate deaminase 1	2.06	2.08
ARF6	ADP-ribosylation factor 6	2.05	1.90
NDFIP1	Nedd4 family interacting protein 1	2.05	2.20
ORMDL3	ORMDL sphingolipid biosynthesis regulator 3	2.05	2.26
CRTC1	CREB regulated transcription coactivator 1	2.00	1.83
SDC4	syndecan 4	2.00	4.43
CHRNB1	cholinergic receptor, nicotinic, beta 1 (muscle)	1.99	6.09
YIPF4	Yip1 domain family, member 4	1.99	1.63
PHACTR2	phosphatase and actin regulator 2	1.97	2.55
MSI2	musashi RNA-binding protein 2	1.96	1.79
TOLLIP	toll interacting protein	1.95	1.90

ATP6V0A1	ATPase, H+ transporting, lysosomal V0 subunit a1	1.95	2.38
MIB1	mindbomb E3 ubiquitin protein ligase 1	1.95	1.75
SBDS	Shwachman-Bodian-Diamond syndrome	1.94	2.35
IKZF2	IKAROS family zinc finger 2 (Helios)	1.94	1.57
SBDS	Shwachman-Bodian-Diamond syndrome	1.92	2.35
ORMDL3	ORMDL sphingolipid biosynthesis regulator 3	1.91	2.26
NDFIP1	Nedd4 family interacting protein 1	1.89	2.20
CAB39	calcium binding protein 39	1.88	1.71
PTPRJ	protein tyrosine phosphatase, receptor type, J	1.88	1.98
ZFYVE27	zinc finger, FYVE domain containing 27	1.87	1.80
CMTM7	CKLF-like MARVEL transmembrane domain containing 7	1.86	7.01
WASL	Wiskott-Aldrich syndrome-like	1.86	2.18
AKT2	v-akt murine thymoma viral oncogene homolog 2	1.85	1.74
EXOC2	exocyst complex component 2	1.84	1.58
C1QTNF7	C1q and tumor necrosis factor related protein 7	1.83	4.38
PHC3	polyhomeotic homolog 3 (Drosophila)	1.83	1.92
DOCK11	dedicator of cytokinesis 11	1.82	3.93
TOM1L2	target of myb1-like 2 (chicken)	1.79	1.72
PRR13	proline rich 13	1.79	1.87
TTC14	tetratricopeptide repeat domain 14	1.78	1.75
NFAT5	nuclear factor of activated T-cells 5, tonicity-responsive	1.78	1.86
PLEKHA5	pleckstrin homology domain containing, family A member 5	1.77	3.10
CFLAR	CASP8 and FADD-like apoptosis regulator	1.77	2.03
HIPK3	homeodomain interacting protein kinase 3	1.75	1.92
INTS3	integrator complex subunit 3	1.72	1.96
PDCD6IP	programmed cell death 6 interacting protein	1.71	1.66
NRP1	neuropilin 1	1.70	1.94
DCBLD2	discoidin, CUB and LCCL domain containing 2	1.69	4.91
WTIP	Wilms tumor 1 interacting protein	1.68	1.63
PHACTR4	phosphatase and actin regulator 4	1.65	3.15
LMTK3	lemur tyrosine kinase 3	1.64	1.50
RRAS2	related RAS viral (r-ras) oncogene homolog 2	1.64	1.77
DCBLD2	discoidin, CUB and LCCL domain containing 2	1.63	4.91
IMPACT	impact RWD domain protein	1.63	1.81
P2RX4	purinergic receptor P2X, ligand-gated ion channel, 4	1.62	2.21
ZFP91	ZFP91 zinc finger protein	1.62	1.95
MYOM2	myomesin 2	1.61	18.85
RRAS2	related RAS viral (r-ras) oncogene homolog 2	1.61	1.77
PAPD4	PAP associated domain containing 4	1.60	1.92
CACNA2D2	calcium channel, voltage-dependent, alpha 2/delta subunit 2	1.60	2.66
PHACTR2	phosphatase and actin regulator 2	1.59	2.55
BRD2	bromodomain containing 2	1.59	1.67
DNASE1L1	deoxyribonuclease I-like 1	1.58	2.65
RGS3	regulator of G-protein signaling 3	1.58	1.52
SETD7	SET domain containing (lysine methyltransferase) 7	1.57	6.14
LGALSL	lectin, galactoside-binding-like	1.57	5.44
SIGMAR1	sigma non-opioid intracellular receptor 1	1.55	1.68
DCBLD2	discoidin, CUB and LCCL domain containing 2	1.55	4.91
ZFP91	ZFP91 zinc finger protein	1.54	1.95
KDM6A	lysine (K)-specific demethylase 6A	1.53	1.51
INO80D	INO80 complex subunit D	1.51	1.58
UBE2H	ubiquitin-conjugating enzyme E2H	1.50	2.73

Supplementary Table 4
Genes enriched in podocytes *in vitro*, but not in adult human glomeruli or mouse podocytes *in vivo*

Gene Symbol	Gene Name	iPS-derived podocytes
LAMP3	lysosomal-associated membrane protein 3	248.08
DSC1	desmocollin 1	144.03
KLRB1	killer cell lectin-like receptor subfamily B, member 1	136.55
SERPIND1	serpin peptidase inhibitor, clade D (heparin cofactor), member 1	133.81
GSDMA	gasdermin A	102.44
ST6GALNAC2	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 2	98.02
RFPL2	ret finger protein-like 2	94.82
SDPR	serum deprivation response	88.06
AADACL4	arylacetamide deacetylase-like 4	73.71
POU2AF1	POU class 2 associating factor 1	58.33
HSD11B1	hydroxysteroid (11-beta) dehydrogenase 1	56.90
LINC01127	long intergenic non-protein coding RNA 1127	54.22
HEPN1	hepatocellular carcinoma, down-regulated 1	48.14
SOST	sclerostin	47.27
RFPL1	ret finger protein-like 1	47.12
AQP3	aquaporin 3 (Gill blood group)	45.83
TFF3	trefoil factor 3 (intestinal)	44.84
RSPH10B	radial spoke head 10 homolog B (Chlamydomonas)	44.40
DAPL1	death associated protein-like 1	41.83
STON2	stonin 2	40.72
MRGPRF	MAS-related GPR, member F	40.47
LINC00488	long intergenic non-protein coding RNA 488	39.38
TFF3	trefoil factor 3 (intestinal)	39.14
TRIM54	tripartite motif containing 54	38.65
PRUNE2	prune homolog 2 (Drosophila)	36.34
MAGI2-IT1	MAGI2 intronic transcript 1 (non-protein coding)	35.46
CAMK2A	calcium/calmodulin-dependent protein kinase II alpha	35.22
AQP3	aquaporin 3 (Gill blood group)	34.83
LOC284080	uncharacterized LOC284080	34.46
PLAC1	placenta-specific 1	32.27
HEPACAM	hepatic and glial cell adhesion molecule	31.99
TNFRSF8	tumor necrosis factor receptor superfamily, member 8	31.78
FRMD3	FERM domain containing 3	31.59
OLFM3	olfactomedin 3	31.35
TESC	tescalcin	31.33
HEPACAM	hepatic and glial cell adhesion molecule	31.33
DAPL1	death associated protein-like 1	29.49
FRMD3	FERM domain containing 3	29.02
C21orf37	chromosome 21 open reading frame 37	28.78
CPZ	carboxypeptidase Z	28.75
KIRREL2	kin of IRRE like 2 (Drosophila)	28.64
LAMB3	laminin, beta 3	28.34
FAM46C	family with sequence similarity 46, member C	28.23
FRMD3	FERM domain containing 3	28.18
DLG2	discs, large homolog 2 (Drosophila)	27.79
C15orf27	chromosome 15 open reading frame 27	27.21
GRIK1-AS1	GRIK1 antisense RNA 1	25.52
PDE6B	phosphodiesterase 6B, cGMP-specific, rod, beta	25.10
PAPPA	pregnancy-associated plasma protein A, pappalysin 1	24.65
ABLIM2	actin binding LIM protein family, member 2	24.36
LOC100506688	uncharacterized LOC100506688	23.99
CRYGN	crystallin, gamma N	22.99
SBSPON	somatomedin B and thrombospondin, type 1 domain containing	22.78
CST2	cystatin SA	22.63
GPA33	glycoprotein A33 (transmembrane)	22.51
ATOH7	atonal homolog 7 (Drosophila)	22.32
ARC	activity-regulated cytoskeleton-associated protein	22.14
S100A7	S100 calcium binding protein A7	21.65
G0S2	G0/G1 switch 2	21.64
LINC00961	long intergenic non-protein coding RNA 961	21.32

DMBT1	deleted in malignant brain tumors 1	21.17
FAM81B	family with sequence similarity 81, member B	21.08
C2	complement component 2	20.73
DRD4	dopamine receptor D4	20.71
AQP7P1	aquaporin 7 pseudogene 1	20.26
TPPP2	tubulin polymerization-promoting protein family member 2	19.13
DHRS2	dehydrogenase/reductase (SDR family) member 2	19.08
HSBP1L1	heat shock factor binding protein 1-like 1	18.61
IL10RA	interleukin 10 receptor, alpha	18.47
TMEM178A	transmembrane protein 178A	18.23
SYTL1	synaptotagmin-like 1	18.10
LOC100128340	uncharacterized LOC100128340	18.08
MRO	maestro	17.97
DSC2	desmocollin 2	17.90
NECAB1	N-terminal EF-hand calcium binding protein 1	17.88
NEBL-AS1	NEBL antisense RNA 1	17.29
C2orf91	chromosome 2 open reading frame 91	17.28
MRGPRF	MAS-related GPR, member F	17.26
SYTL1	synaptotagmin-like 1	17.13
DNAJB13	DnaJ (Hsp40) homolog, subfamily B, member 13	17.04
LINC01197	long intergenic non-protein coding RNA 1197	16.90
CARD6	caspase recruitment domain family, member 6	16.88
VAMP8	vesicle-associated membrane protein 8	16.60
RASSF10	Ras association (RalGDS/AF-6) domain family (N-terminal) member 10	16.49
VSIG8	V-set and immunoglobulin domain containing 8	16.44
KRT19P2	keratin 19 pseudogene 2	16.42
KRT4	keratin 4	16.42
FREM2	FRAS1 related extracellular matrix protein 2	16.35
FOXL1	forkhead box L1	16.06
CD7	CD7 molecule	16.00
CCDC73	coiled-coil domain containing 73	15.67
MSLN	mesothelin	15.64
C15orf59	chromosome 15 open reading frame 59	15.37
KRT19	keratin 19	15.27
ZNF750	zinc finger protein 750	15.11
CHP2	calcineurin-like EF-hand protein 2	15.02
PRUNE2	prune homolog 2 (Drosophila)	15.02
GABRA2	gamma-aminobutyric acid (GABA) A receptor, alpha 2	14.49
FAM129A	family with sequence similarity 129, member A	14.41
MYBPC2	myosin binding protein C, fast type	14.35
CATIP	ciliogenesis associated TTC17 interacting protein	14.20
DKFZP761C1711	uncharacterized protein DKFZp761C1711	14.14
TSPAN8	tetraspanin 8	14.09
ABLIM2	actin binding LIM protein family, member 2	14.08
RAB11FIP1	RAB11 family interacting protein 1 (class I)	14.00
MYH13	myosin, heavy chain 13, skeletal muscle	13.78
LOC101929494	uncharacterized LOC101929494	13.57
SFXN2	sideroflexin 2	13.29
SLC51A	solute carrier family 51, alpha subunit	13.10
CRTAC1	cartilage acidic protein 1	13.02
GPR133	G protein-coupled receptor 133	12.98
SECTM1	secreted and transmembrane 1	12.92
RASSF10	Ras association (RalGDS/AF-6) domain family (N-terminal) member 10	12.75
LEFTY1	left-right determination factor 1	12.74
GADL1	glutamate decarboxylase-like 1	12.73
MFNG	MFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase	12.59
GFRA3	GDNF family receptor alpha 3	12.34
GPR62	G protein-coupled receptor 62	12.23
EPS8L1	EPS8-like 1	12.21
MIR4697HG	MIR4697 host gene (non-protein coding)	12.18
DPPA2	developmental pluripotency associated 2	11.77
FAAH	fatty acid amide hydrolase	11.74
RAB11FIP1	RAB11 family interacting protein 1 (class I)	11.71
PNKD	paroxysmal nonkinesigenic dyskinesia	11.68
CPNE5	copine V	11.62
CARD6	caspase recruitment domain family, member 6	11.49
ANKRD65	ankyrin repeat domain 65	11.36

LOC100127909	uncharacterized LOC100127909	11.24
PLCG2	phospholipase C, gamma 2 (phosphatidylinositol-specific)	11.14
GPR98	G protein-coupled receptor 98	11.09
CCDC109B	coiled-coil domain containing 109B	10.93
LOC101929687	uncharacterized LOC101929687	10.72
CRB2	crumbs family member 2	10.72
TMEM139	transmembrane protein 139	10.59
CPEB1	cytoplasmic polyadenylation element binding protein 1	10.58
ZMIZ1-AS1	ZMIZ1 antisense RNA 1	10.55
GNG13	guanine nucleotide binding protein (G protein), gamma 13	10.53
ADRA2C	adrenoceptor alpha 2C	10.40
TFF3	trefoil factor 3 (intestinal)	10.29
LILRB3	leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3	10.21
PCP4	Purkinje cell protein 4	9.94
KLHL30	kelch-like family member 30	9.75
PLEKHB1	pleckstrin homology domain containing, family B (evectins) member 1	9.63
SMIM5	small integral membrane protein 5	9.60
GPX3	glutathione peroxidase 3 (plasma)	9.60
RAB37	RAB37, member RAS oncogene family	9.56
FOXD2	forkhead box D2	9.54
SULT1C2	sulfotransferase family, cytosolic, 1C, member 2	9.53
MLC1	megalencephalic leukoencephalopathy with subcortical cysts 1	9.53
DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6	9.51
TMCC3	transmembrane and coiled-coil domain family 3	9.42
KIAA2022	KIAA2022	9.34
MYH3	myosin, heavy chain 3, skeletal muscle, embryonic	9.31
FUT1	fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase, H blood group)	9.25
GPX3	glutathione peroxidase 3 (plasma)	9.21
CD22	CD22 molecule	9.15
CCDC122	coiled-coil domain containing 122	9.14
SOWAHA	sosondowah ankyrin repeat domain family member A	9.11
TRADD	TNFRSF1A-associated via death domain	9.11
S100A2	S100 calcium binding protein A2	9.07
GPD1	glycerol-3-phosphate dehydrogenase 1 (soluble)	9.02
SLC16A1	solute carrier family 16 (monocarboxylate transporter), member 1	8.95
SYPL2	synaptophysin-like 2	8.91
GPR126	G protein-coupled receptor 126	8.88
LRRC36	leucine rich repeat containing 36	8.85
C2	complement component 2	8.84
ASPG	asparaginase	8.83
ENPP5	ectonucleotide pyrophosphatase/phosphodiesterase 5 (putative)	8.79
F13A1	coagulation factor XIII, A1 polypeptide	8.76
EMID1	EMI domain containing 1	8.70
RIC3	RIC3 acetylcholine receptor chaperone	8.64
ADAMTSL4	ADAMTS-like 4	8.49
UNC5B-AS1	UNC5B antisense RNA 1	8.40
RPH3AL	rabphilin 3A-like (without C2 domains)	8.34
TMEM40	transmembrane protein 40	8.27
XKR4	XK, Kell blood group complex subunit-related family, member 4	8.25
SYTL4	synaptotagmin-like 4	8.22
FRAS1	Fraser syndrome 1	8.22
ANXA9	annexin A9	8.16
FAM174B	family with sequence similarity 174, member B	8.14
INMT	indolethylamine N-methyltransferase	8.13
SYPL2	synaptophysin-like 2	8.11
DUSP23	dual specificity phosphatase 23	8.11
CLEC4M	C-type lectin domain family 4, member M	8.07
C15orf52	chromosome 15 open reading frame 52	7.98
LRFN2	leucine rich repeat and fibronectin type III domain containing 2	7.94
DOC2B	double C2-like domains, beta	7.90
STAC2	SH3 and cysteine rich domain 2	7.85
NMRK1	nicotinamide riboside kinase 1	7.83
NMRK1	nicotinamide riboside kinase 1	7.79
CILP2	cartilage intermediate layer protein 2	7.78
RASSF5	Ras association (RalGDS/AF-6) domain family member 5	7.68
GGT5	gamma-glutamyltransferase 5	7.67
WSCD2	WSC domain containing 2	7.64
NCCRP1	non-specific cytotoxic cell receptor protein 1 homolog (zebrafish)	7.63

FDXR	ferredoxin reductase	7.56
XKR4	XK, Kell blood group complex subunit-related family, member 4	7.55
LOC727808	uncharacterized LOC727808	7.50
NDUFA4L2	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4-like 2	7.46
TCP11L2	t-complex 11, testis-specific-like 2	7.43
S100A6	S100 calcium binding protein A6	7.40
RAB6B	RAB6B, member RAS oncogene family	7.26
XK	X-linked Kx blood group (McLeod syndrome)	7.26
PAX8	paired box 8	7.19
PRUNE2	prune homolog 2 (Drosophila)	7.18
DEPTOR	DEP domain containing MTOR-interacting protein	7.18
SHISA2	shisa family member 2	7.16
HKDC1	hexokinase domain containing 1	7.13
FAAH	fatty acid amide hydrolase	7.09
C1QL4	complement component 1, q subcomponent-like 4	7.08
ABCA4	ATP-binding cassette, sub-family A (ABC1), member 4	7.04
EPSTI1	epithelial stromal interaction 1 (breast)	7.03
MT1M	metallothionein 1M	7.00
MIR503HG	MIR503 host gene (non-protein coding)	6.97
MGST1	microsomal glutathione S-transferase 1	6.94
GMPR	guanosine monophosphate reductase	6.90
CILP	cartilage intermediate layer protein, nucleotide pyrophosphohydrolase	6.86
CLDN1	claudin 1	6.86
FMO4	flavin containing monooxygenase 4	6.84
CCDC178	coiled-coil domain containing 178	6.84
LIM2	lens intrinsic membrane protein 2, 19kDa	6.84
C11orf52	chromosome 11 open reading frame 52	6.82
PNPLA7	patatin-like phospholipase domain containing 7	6.75
PPARGC1B	peroxisome proliferator-activated receptor gamma, coactivator 1 beta	6.73
GNAO1	guanine nucleotide binding protein (G protein), alpha activating activity polypeptide O	6.73
PIGZ	phosphatidylinositol glycan anchor biosynthesis, class Z	6.72
LRRN2	leucine rich repeat neuronal 2	6.69
ABCC3	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	6.68
SUSD2	sushi domain containing 2	6.66
PAQR7	progestin and adipoQ receptor family member VII	6.61
SGK1	serum/glucocorticoid regulated kinase 1	6.57
CPXM1	carboxypeptidase X (M14 family), member 1	6.57
SLC9A3R1	solute carrier family 9, subfamily A (NHE3, cation proton antiporter 3), member 3 regulator 1	6.53
LMNTD2	lamin tail domain containing 2	6.52
GFRA2	GDNF family receptor alpha 2	6.50
CXCL1	chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)	6.48
COLEC11	collectin sub-family member 11	6.45
FAM83G	family with sequence similarity 83, member G	6.35
SULT1C2	sulfotransferase family, cytosolic, 1C, member 2	6.29
TRIM8	tripartite motif containing 8	6.29
DOK7	docking protein 7	6.23
UTF1	undifferentiated embryonic cell transcription factor 1	6.21
IP6K3	inositol hexakisphosphate kinase 3	6.21
PAPLN	papilin, proteoglycan-like sulfated glycoprotein	6.20
LRRC4C	leucine rich repeat containing 4C	6.14
CFHR3	complement factor H-related 3	6.09
MT1X	metallothionein 1X	6.03
KREMEN2	kringle containing transmembrane protein 2	6.02
ROM1	retinal outer segment membrane protein 1	6.01
PFKP	phosphofructokinase, platelet	5.99
RERG	RAS-like, estrogen-regulated, growth inhibitor	5.99
TRIB1	tribbles pseudokinase 1	5.95
FAM183A	family with sequence similarity 183, member A	5.94
FRAS1	Fraser syndrome 1	5.94
LINC00472	long intergenic non-protein coding RNA 472	5.91
PFKP	phosphofructokinase, platelet	5.88
ITGB8	integrin, beta 8	5.85
DPF3	D4, zinc and double PHD fingers, family 3	5.83
DACH2	dachshund family transcription factor 2	5.81
SLC15A1	solute carrier family 15 (oligopeptide transporter), member 1	5.81
PPARGC1B	peroxisome proliferator-activated receptor gamma, coactivator 1 beta	5.81
IRX4	iroquois homeobox 4	5.79
ALPL	alkaline phosphatase, liver/bone/kidney	5.76
SH3RF1	SH3 domain containing ring finger 1	5.74
ULK4	unc-51 like kinase 4	5.74

GCNT1	glucosaminyl (N-acetyl) transferase 1, core 2	5.69
KANK3	KN motif and ankyrin repeat domains 3	5.66
THBD	thrombomodulin	5.65
CTSL	cathepsin L	5.65
UBTD1	ubiquitin domain containing 1	5.63
NKAIN4	Na+/K+ transporting ATPase interacting 4	5.63
STON1-GTF2A1L	STON1-GTF2A1L readthrough	5.62
WASH5P	WAS protein family homolog 5 pseudogene	5.62
NRG3	neuregulin 3	5.62
KRT80	keratin 80	5.60
SLC6A13	solute carrier family 6 (neurotransmitter transporter), member 13	5.58
TMEM130	transmembrane protein 130	5.57
SLC7A7	solute carrier family 7 (amino acid transporter light chain, y+L system), member 7	5.56
CPEB4	cytoplasmic polyadenylation element binding protein 4	5.54
IL4I1	interleukin 4 induced 1	5.51
LOC100131043	uncharacterized LOC100131043	5.51
CCNB3	cyclin B3	5.50
NFE2L3	nuclear factor, erythroid 2-like 3	5.49
SLC2A1	solute carrier family 2 (facilitated glucose transporter), member 1	5.45
STXBP2	syntaxin binding protein 2	5.42
FAM183B	acyloxyacyl hydrolase (neutrophil)	5.41
CPAMD8	C3 and PZP-like, alpha-2-macroglobulin domain containing 8	5.39
ST8SIA5	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 5	5.37
GRTP1	growth hormone regulated TBC protein 1	5.37
PRSS16	protease, serine, 16 (thymus)	5.36
PTPLB	protein tyrosine phosphatase-like (proline instead of catalytic arginine), member b	5.34
C11orf71	chromosome 11 open reading frame 71	5.33
VEPH1	ventricular zone expressed PH domain-containing 1	5.29
NRG3	neuregulin 3	5.28
CCBE1	collagen and calcium binding EGF domains 1	5.26
ICOSLG	inducible T-cell co-stimulator ligand	5.24
SNX25	sorting nexin 25	5.22
MLXIPL	MLX interacting protein-like	5.20
ITGA6	integrin, alpha 6	5.18
SPATA13	spermatogenesis associated 13	5.18
KISS1R	KISS1 receptor	5.18
LOC102725171	uncharacterized LOC102725171	5.15
NTN4	netrin 4	5.13
ADAP1	ArfGAP with dual PH domains 1	5.10
SPATA13	spermatogenesis associated 13	5.07
MUSTN1	musculoskeletal, embryonic nuclear protein 1	5.07
CECR5-AS1	CECR5 antisense RNA 1	5.05
SMTNL2	smoothelin-like 2	5.03
CDK20	cyclin-dependent kinase 20	5.00
PLCD3	phospholipase C, delta 3	5.00
IL10RB	interleukin 10 receptor, beta	5.00
CDS1	CDP-diacylglycerol synthase (phosphatidate cytidylyltransferase) 1	4.99
C1orf226	chromosome 1 open reading frame 226	4.99
S100A1	S100 calcium binding protein A1	4.98
WWC2-AS2	WWC2 antisense RNA 2	4.94
FZD6	frizzled class receptor 6	4.90
SPATA13	spermatogenesis associated 13	4.90
RASAL1	RAS protein activator like 1 (GAP1 like)	4.87
GRHL1	grainyhead-like 1 (Drosophila)	4.81
AP1S3	adaptor-related protein complex 1, sigma 3 subunit	4.81
SELV	selenoprotein V	4.76
FOSB	FBJ murine osteosarcoma viral oncogene homolog B	4.74
FAM20C	family with sequence similarity 20, member C	4.73
SLC7A8	solute carrier family 7 (amino acid transporter light chain, L system), member 8	4.72
MFSD6	major facilitator superfamily domain containing 6	4.72
TMEM64	transmembrane protein 64	4.70
CDS1	CDP-diacylglycerol synthase (phosphatidate cytidylyltransferase) 1	4.69
HIPK2	homeodomain interacting protein kinase 2	4.69
NUDT18	nudix (nucleoside diphosphate linked moiety X)-type motif 18	4.68
ITGA6	integrin, alpha 6	4.68
AFAP1L2	actin filament associated protein 1-like 2	4.67
LYPD1	LY6/PLAUR domain containing 1	4.65

PARD6G	par-6 family cell polarity regulator gamma	4.61
TNXB	tenascin XB	4.61
FREM1	FRAS1 related extracellular matrix 1	4.58
ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9	4.57
CDK20	cyclin-dependent kinase 20	4.56
MROH1	maestro heat-like repeat family member 1	4.56
LRRC56	leucine rich repeat containing 56	4.55
LST1	leukocyte specific transcript 1	4.50
LMNA	lamin A/C	4.50
RARRES3	retinoic acid receptor responder (tazarotene induced) 3	4.50
FAM101B	family with sequence similarity 101, member B	4.49
LINC00173	long intergenic non-protein coding RNA 173	4.48
SLC22A18	solute carrier family 22, member 18	4.46
SLC16A3	solute carrier family 16 (monocarboxylate transporter), member 3	4.46
APLN	apelin	4.42
SEPP1	selenoprotein P, plasma, 1	4.41
ANKH	ANKH inorganic pyrophosphate transport regulator	4.39
SEMA4G	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4G	4.37
LOC102725171	uncharacterized LOC102725171	4.35
TSTD1	thiosulfate sulfurtransferase (rhodanese)-like domain containing 1	4.35
OSTF1	osteoclast stimulating factor 1	4.34
SELV	selenoprotein V	4.31
ANKH	ANKH inorganic pyrophosphate transport regulator	4.31
CHMP4C	charged multivesicular body protein 4C	4.30
S100A16	S100 calcium binding protein A16	4.30
LSR	lipolysis stimulated lipoprotein receptor	4.29
LRRC9	leucine rich repeat containing 9	4.26
PTPN6	protein tyrosine phosphatase, non-receptor type 6	4.25
ACOX2	acyl-CoA oxidase 2, branched chain	4.25
TTC18	tetratricopeptide repeat domain 18	4.24
KCTD16	potassium channel tetramerization domain containing 16	4.20
NKAIN2	Na+/K+ transporting ATPase interacting 2	4.19
LYPD1	LY6/PLAUR domain containing 1	4.19
CPXM2	carboxypeptidase X (M14 family), member 2	4.19
HOXA4	homeobox A4	4.19
AP1M2	adaptor-related protein complex 1, mu 2 subunit	4.17
ASS1	argininosuccinate synthase 1	4.14
LMNA	lamin A/C	4.13
KCNQ1	potassium voltage-gated channel, KQT-like subfamily, member 1	4.11
RAB37	RAB37, member RAS oncogene family	4.10
TCTA	T-cell leukemia translocation altered	4.09
CLDN7	claudin 7	4.08
FAM83H	family with sequence similarity 83, member H	4.08
IGFALS	insulin-like growth factor binding protein, acid labile subunit	4.06
SESN2	sestrin 2	4.06
PAWR	PRKC, apoptosis, WT1, regulator	4.05
PKP2	plakophilin 2	4.04
SIAE	sialic acid acetylesterase	4.03
BNC1	basonuclin 1	4.03
IGSF1	immunoglobulin superfamily, member 1	4.02
ZDHHC12	zinc finger, DHHC-type containing 12	4.00
SLC16A10	solute carrier family 16 (aromatic amino acid transporter), member 10	3.98
HIPK2	homeodomain interacting protein kinase 2	3.98
SLC15A3	solute carrier family 15 (oligopeptide transporter), member 3	3.97
FOXD2-AS1	FOXD2 antisense RNA 1 (head to head)	3.97
NAGLU	N-acetylglucosaminidase, alpha	3.97
ZDHHC12	zinc finger, DHHC-type containing 12	3.96
ADHFE1	alcohol dehydrogenase, iron containing, 1	3.96
WFIKKN1	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 1	3.94
EML3	echinoderm microtubule associated protein like 3	3.92
RASD2	RASD family, member 2	3.92
FRMD4B	FERM domain containing 4B	3.92
NOXA1	NADPH oxidase activator 1	3.92
IQSEC2	IQ motif and Sec7 domain 2	3.92
ELL2	elongation factor, RNA polymerase II, 2	3.92
ZBED5-AS1	ZBED5 antisense RNA 1	3.91
EXOC3L2	exocyst complex component 3-like 2	3.90
LYPD1	LY6/PLAUR domain containing 1	3.90

LOC100996724	phosphodiesterase 4D interacting protein-like	3.89
DICER1-AS1	DICER1 antisense RNA 1	3.89
ZDHHC2	zinc finger, DHHC-type containing 2	3.89
FOXJ1	forkhead box J1	3.88
MAFK	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog K	3.86
HES4	hes family bHLH transcription factor 4	3.86
BDNF-AS	BDNF antisense RNA	3.85
CASC2	cancer susceptibility candidate 2 (non-protein coding)	3.85
PPP1R3E	protein phosphatase 1, regulatory subunit 3E	3.85
FOXO4	forkhead box O4	3.85
SMPDL3B	sphingomyelin phosphodiesterase, acid-like 3B	3.84
FOS	FBJ murine osteosarcoma viral oncogene homolog	3.84
LINC00957	long intergenic non-protein coding RNA 957	3.83
KLHDC9	kelch domain containing 9	3.82
SELT	selenoprotein T	3.79
CXADR	coxsackie virus and adenovirus receptor	3.78
ADI1	acireductone dioxygenase 1	3.77
ASS1	argininosuccinate synthase 1	3.77
HEY2	hes-related family bHLH transcription factor with YRPW motif 2	3.76
RGS9	regulator of G-protein signaling 9	3.76
TMEM64	transmembrane protein 64	3.75
LOC730183	uncharacterized LOC730183	3.74
CYB561	cytochrome b561	3.74
AGPAT9	1-acylglycerol-3-phosphate O-acyltransferase 9	3.73
NUP210	nucleoporin 210kDa	3.73
C17orf97	chromosome 17 open reading frame 97	3.72
CMTM4	CKLF-like MARVEL transmembrane domain containing 4	3.69
MAOA	monoamine oxidase A	3.69
PNPLA2	patatin-like phospholipase domain containing 2	3.68
C6orf165	chromosome 6 open reading frame 165	3.68
TEAD4	TEA domain family member 4	3.67
SLC6A12	solute carrier family 6 (neurotransmitter transporter), member 12	3.66
IGFBP4	insulin-like growth factor binding protein 4	3.66
C16orf74	chromosome 16 open reading frame 74	3.66
ABTB1	ankyrin repeat and BTB (POZ) domain containing 1	3.66
LLGL2	lethal giant larvae homolog 2 (Drosophila)	3.66
FOLR1	folate receptor 1 (adult)	3.66
TRNP1	TMF1-regulated nuclear protein 1	3.65
PPP1R1C	protein phosphatase 1, regulatory (inhibitor) subunit 1C	3.64
AAED1	AhpC/TSA antioxidant enzyme domain containing 1	3.63
CXADR	coxsackie virus and adenovirus receptor	3.62
S1PR1	sphingosine-1-phosphate receptor 1	3.62
MAG	myelin associated glycoprotein	3.62
WNK2	WNK lysine deficient protein kinase 2	3.61
CFD	complement factor D (adipsin)	3.61
IQSEC2	IQ motif and Sec7 domain 2	3.60
TM7SF2	transmembrane 7 superfamily member 2	3.59
PARP9	poly (ADP-ribose) polymerase family, member 9	3.59
SELT	selenoprotein T	3.58
RSPH3	radial spoke 3 homolog (Chlamydomonas)	3.57
WNK2	WNK lysine deficient protein kinase 2	3.57
ATP8A2	ATPase, aminophospholipid transporter, class I, type 8A, member 2	3.55
DIAPH3	diaphanous-related formin 3	3.54
FZD9	frizzled class receptor 9	3.53
SLC4A11	solute carrier family 4, sodium borate transporter, member 11	3.53
TRABD2B	TraB domain containing 2B	3.53
FAM46B	family with sequence similarity 46, member B	3.52
LMX1B	LIM homeobox transcription factor 1, beta	3.52
TBC1D10C	TBC1 domain family, member 10C	3.52
VMAC	vimentin-type intermediate filament associated coiled-coil protein	3.50
TST	thiosulfate sulfurtransferase (rhodanese)	3.50
LHPP	phospholysine phosphohistidine inorganic pyrophosphate phosphatase	3.50
GRID1	glutamate receptor, ionotropic, delta 1	3.49
ATP1A1	ATPase, Na+/K+ transporting, alpha 1 polypeptide	3.49
LOC646762	uncharacterized LOC646762	3.46
SNX25	sorting nexin 25	3.45
POGLUT1	protein O-glucosyltransferase 1	3.44
SEPP1	selenoprotein P, plasma, 1	3.44

ARSD	arylsulfatase D	3.43
ADAMTS9	ADAM metallopeptidase with thrombospondin type 1 motif, 9	3.43
TP53TG3	TP53 target 3	3.42
GHDC	GH3 domain containing	3.42
CARF	calcium responsive transcription factor	3.41
MLXIP	MLX interacting protein	3.41
ME3	malic enzyme 3, NADP(+)-dependent, mitochondrial	3.40
INSIG1	insulin induced gene 1	3.38
MMP15	matrix metallopeptidase 15 (membrane-inserted)	3.38
S100A13	S100 calcium binding protein A13	3.37
SCN2B	sodium channel, voltage-gated, type II, beta subunit	3.37
SHANK2	SH3 and multiple ankyrin repeat domains 2	3.36
IGSF9B	immunoglobulin superfamily, member 9B	3.36
ATP1A4	ATPase, Na+/K+ transporting, alpha 4 polypeptide	3.35
PQLC3	PQ loop repeat containing 3	3.34
ACCS	1-aminocyclopropane-1-carboxylate synthase homolog (Arabidopsis)(non-functional)	3.32
FMOD	fibromodulin	3.31
LOC100049716	uncharacterized LOC100049716	3.31
ADI1	acireductone dioxygenase 1	3.31
LOC102723456	uncharacterized LOC102723456	3.31
ZNF396	zinc finger protein 396	3.30
CCIN	calicin	3.28
DNAJB12	DnaJ (Hsp40) homolog, subfamily B, member 12	3.28
ATP1A4	ATPase, Na+/K+ transporting, alpha 4 polypeptide	3.27
LRRC8A	leucine rich repeat containing 8 family, member A	3.26
ECHDC2	enoyl CoA hydratase domain containing 2	3.26
SLC25A26	solute carrier family 25 (S-adenosylmethionine carrier), member 26	3.26
ACSL1	acyl-CoA synthetase long-chain family member 1	3.25
ESYT2	extended synaptotagmin-like protein 2	3.25
WDR66	WD repeat domain 66	3.24
C5orf15	chromosome 5 open reading frame 15	3.24
ARRDC1	arrestin domain containing 1	3.24
CDH3	cadherin 3, type 1, P-cadherin (placental)	3.24
SNX8	sorting nexin 8	3.24
PAXIP1-AS1	PAXIP1 antisense RNA 1 (head to head)	3.23
NKAIN4	Na+/K+ transporting ATPase interacting 4	3.22
CANX	calnexin	3.22
LYPD6B	LY6/PLAUR domain containing 6B	3.22
CASZ1	castor zinc finger 1	3.22
LOC100129846	uncharacterized LOC100129846	3.22
ADAT2	adenosine deaminase, tRNA-specific 2	3.22
CA11	carbonic anhydrase XI	3.21
OR7E12P	olfactory receptor, family 7, subfamily E, member 12 pseudogene	3.21
MARCH3	membrane-associated ring finger (C3HC4) 3, E3 ubiquitin protein ligase	3.20
C1orf213	chromosome 1 open reading frame 213	3.20
ADAMTSL4	ADAMTS-like 4	3.19
LOC100653296	uncharacterized LOC100653296	3.19
THAP8	THAP domain containing 8	3.18
IMPDH1	IMP (inosine 5'-monophosphate) dehydrogenase 1	3.17
SCAMP1-AS1	SCAMP1 antisense RNA 1	3.16
PRSS23	protease, serine, 23	3.15
GPHN	gephyrin	3.15
KMO	kynurenine 3-monooxygenase (kynurenine 3-hydroxylase)	3.14
GAS7	growth arrest-specific 7	3.13
COMTD1	catechol-O-methyltransferase domain containing 1	3.12
TMEM30A	transmembrane protein 30A	3.11
HAGLR	HOXD antisense growth-associated long non-coding RNA	3.10
ZMAT1	zinc finger, matrin-type 1	3.09
SMCO4	single-pass membrane protein with coiled-coil domains 4	3.09
WDR86	WD repeat domain 86	3.09
EMILIN2	elastin microfibril interfacer 2	3.09
JDP2	Jun dimerization protein 2	3.08
EIF3M	eukaryotic translation initiation factor 3, subunit M	3.08
FBXO21	F-box protein 21	3.08

PCBD1	pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha	3.06
C5orf15	chromosome 5 open reading frame 15	3.06
TPP1	tripeptidyl peptidase I	3.06
ZNRF3	zinc and ring finger 3	3.05
RNF139	ring finger protein 139	3.04
OCA2	oculocutaneous albinism II	3.04
TMEM191A	transmembrane protein 191A (pseudogene)	3.04
LDLRAP1	low density lipoprotein receptor adaptor protein 1	3.04
KLHL29	kelch-like family member 29	3.03
F11R	F11 receptor	3.02
ADPRH	ADP-ribosylarginine hydrolase	3.02
JKAMP	JNK1/MAPK8-associated membrane protein	3.01
ODF3B	outer dense fiber of sperm tails 3B	3.01
PIM2	pim-2 oncogene	3.01
MAOB	monoamine oxidase B	3.00
LRRC4	leucine rich repeat containing 4	3.00
CCDC9	coiled-coil domain containing 9	3.00
LOC254896	uncharacterized LOC254896	3.00
SCARNA9	small Cajal body-specific RNA 9	2.99
SIRT5	sirtuin 5	2.99
EXD3	exonuclease 3'-5' domain containing 3	2.99
CBR4	carbonyl reductase 4	2.98
TCTN1	tectonic family member 1	2.98
GPSM1	G-protein signaling modulator 1	2.96
SRGAP2C	SLIT-ROBO Rho GTPase activating protein 2C	2.95
AJUBA	ajuba LIM protein	2.95
KCP	kielin/chordin-like protein	2.95
RBM38	RNA binding motif protein 38	2.94
SNORD116-19	small nucleolar RNA, C/D box 116-19	2.94
KIF1A	kinesin family member 1A	2.94
ITFG1	integrin alpha FG-GAP repeat containing 1	2.94
TEX41	testis expressed 41 (non-protein coding)	2.93
SKAP1	src kinase associated phosphoprotein 1	2.93
PPP1R9A	protein phosphatase 1, regulatory subunit 9A	2.91
MYLK2	myosin light chain kinase 2	2.91
PAN2	PAN2 poly(A) specific ribonuclease subunit	2.91
MVB12A	multivesicular body subunit 12A	2.91
LOC100507547	uncharacterized LOC100507547	2.91
SLC37A4	solute carrier family 37 (glucose-6-phosphate transporter), member 4	2.91
TSPAN3	tetraspanin 3	2.91
RAB3IL1	RAB3A interacting protein (rabin3)-like 1	2.91
LINC01003	long intergenic non-protein coding RNA 1003	2.91
MAP3K5	mitogen-activated protein kinase kinase kinase 5	2.90
C6orf57	chromosome 6 open reading frame 57	2.90
CDKN2C	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)	2.89
TOLLIP-AS1	TOLLIP antisense RNA 1 (head to head)	2.89
HRASLS5	HRAS-like suppressor family, member 5	2.87
LHPP	phospholysine phosphohistidine inorganic pyrophosphate phosphatase	2.87
KCNE3	potassium voltage-gated channel, Isk-related family, member 3	2.87
GPR162	G protein-coupled receptor 162	2.86
SPR	sepiapterin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase)	2.85
PTGR2	prostaglandin reductase 2	2.84
ZNF524	zinc finger protein 524	2.84
STX1A	syntaxin 1A (brain)	2.83
TCEAL6	transcription elongation factor A (SII)-like 6	2.83
LOC100288911	uncharacterized LOC100288911	2.83
DTWD2	DTW domain containing 2	2.82
PHYKPL	5-phosphohydroxy-L-lysine phospho-lyase	2.82
RNF208	ring finger protein 208	2.82
ATP11A	ATPase, class VI, type 11A	2.82
GLB1L2	galactosidase, beta 1-like 2	2.81
RNF208	ring finger protein 208	2.81
SNHG20	small nucleolar RNA host gene 20 (non-protein coding)	2.81
DAK	dihydroxyacetone kinase 2 homolog (S. cerevisiae)	2.81
SH3KBP1	SH3-domain kinase binding protein 1	2.81

DNALI1	dynein, axonemal, light intermediate chain 1	2.80
AMFR	autocrine motility factor receptor, E3 ubiquitin protein ligase	2.80
ABLIM2	actin binding LIM protein family, member 2	2.80
CLDN3	claudin 3	2.80
SLC9A7	solute carrier family 9, subfamily A (NHE7, cation proton antiporter 7), member 7	2.80
PEBP4	phosphatidylethanolamine-binding protein 4	2.80
C10orf25	chromosome 10 open reading frame 25	2.79
COX7A1	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	2.79
KIAA1522	KIAA1522	2.79
SMIM1	small integral membrane protein 1 (Vel blood group)	2.78
PCSK4	proprotein convertase subtilisin/kexin type 4	2.78
DOK1	docking protein 1, 62kDa (downstream of tyrosine kinase 1)	2.77
RILPL2	Rab interacting lysosomal protein-like 2	2.77
ARHGEF15	Rho guanine nucleotide exchange factor (GEF) 15	2.76
FRS2	fibroblast growth factor receptor substrate 2	2.76
ABTB1	ankyrin repeat and BTB (POZ) domain containing 1	2.76
HIST1H2AC	histone cluster 1, H2ac	2.76
TNXB	tenascin XB	2.75
TCEAL6	transcription elongation factor A (SII)-like 6	2.75
NOL4L	nucleolar protein 4-like	2.75
PPM1J	protein phosphatase, Mg2+/Mn2+ dependent, 1J	2.74
KIAA1671	KIAA1671	2.74
FSIP2	fibrous sheath interacting protein 2	2.74
SKAP2	src kinase associated phosphoprotein 2	2.73
LPIN3	lipin 3	2.73
ANAPC16	anaphase promoting complex subunit 16	2.72
C8orf58	chromosome 8 open reading frame 58	2.72
MTR	5-methyltetrahydrofolate-homocysteine methyltransferase	2.72
C6orf203	chromosome 6 open reading frame 203	2.72
AK8	adenylate kinase 8	2.71
CST5	cystatin D	2.71
RELL1	RELT-like 1	2.71
SNX30	sorting nexin family member 30	2.71
LMNA	lamin A/C	2.71
EXTL1	exostosin-like glycosyltransferase 1	2.71
FAM63A	family with sequence similarity 63, member A	2.70
NIPA1	non imprinted in Prader-Willi/Angelman syndrome 1	2.70
LOC728061	hCG2003663	2.70
LTBR	lymphotoxin beta receptor (TNFR superfamily, member 3)	2.70
TMEM179B	transmembrane protein 179B	2.70
ARID3B	AT rich interactive domain 3B (BRIGHT-like)	2.70
ZFP36L2	ZFP36 ring finger protein-like 2	2.70
RIBC1	RIB43A domain with coiled-coils 1	2.69
TMEM30A	transmembrane protein 30A	2.69
SH3GLB2	SH3-domain GRB2-like endophilin B2	2.69
GRB7	growth factor receptor-bound protein 7	2.69
BAI1	brain-specific angiogenesis inhibitor 1	2.69
ARAP1	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1	2.68
TANGO2	transport and golgi organization 2 homolog (Drosophila)	2.68
WDSUB1	WD repeat, sterile alpha motif and U-box domain containing 1	2.68
KRT18	keratin 18	2.68
PCMTD2	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 2	2.68
ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif, 1	2.68
TMEM132A	transmembrane protein 132A	2.68
CORO2A	coronin, actin binding protein, 2A	2.67
TMCO4	transmembrane and coiled-coil domains 4	2.67
TYROBP	TYRO protein tyrosine kinase binding protein	2.67
CAPN7	calpain 7	2.67
TSPAN33	tetraspanin 33	2.67
HSD11B2	hydroxysteroid (11-beta) dehydrogenase 2	2.67
LOC100507547	uncharacterized LOC100507547	2.67
F11R	F11 receptor	2.67
PCYOX1L	prenylcysteine oxidase 1 like	2.66
SPSB1	splA/ryanodine receptor domain and SOCS box containing 1	2.66
PPP1R16A	protein phosphatase 1, regulatory subunit 16A	2.66
PIGP	phosphatidylinositol glycan anchor biosynthesis, class P	2.66
SUMF1	sulfatase modifying factor 1	2.66
FURIN	furin (paired basic amino acid cleaving enzyme)	2.66
CCDC96	coiled-coil domain containing 96	2.65

MYO1F	myosin IF	2.65
ZNRF3	zinc and ring finger 3	2.65
NAT8L	N-acetyltransferase 8-like (GCN5-related, putative)	2.64
SNTB1	syntrophin, beta 1 (dystrophin-associated protein A1, 59kDa, basic component 1)	2.64
VAPA	VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa	2.64
BFSP1	beaded filament structural protein 1, filensin	2.64
PNPLA4	patatin-like phospholipase domain containing 4	2.63
SLC26A11	solute carrier family 26 (anion exchanger), member 11	2.62
NEFH	neurofilament, heavy polypeptide	2.62
SLC9A7	solute carrier family 9, subfamily A (NHE7, cation proton antiporter 7), member 7	2.62
RNF13	ring finger protein 13	2.62
CNDP2	CNDP dipeptidase 2 (metallopeptidase M20 family)	2.62
TMEM170B	transmembrane protein 170B	2.62
FBXL14	F-box and leucine-rich repeat protein 14	2.62
GSDMD	gasdermin D	2.62
CHRD	chordin	2.61
KRT18P55	keratin 18 pseudogene 55	2.61
LHX1	LIM homeobox 1	2.61
IFNAR2	interferon (alpha, beta and omega) receptor 2	2.61
SLC16A5	solute carrier family 16 (monocarboxylate transporter), member 5	2.61
MTR	5-methyltetrahydrofolate-homocysteine methyltransferase	2.61
MLLT4	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4	2.60
ABCA7	ATP-binding cassette, sub-family A (ABC1), member 7	2.60
USP40	ubiquitin specific peptidase 40	2.60
FOXI2	forkhead box I2	2.60
CEP170B	centrosomal protein 170B	2.60
CCNDBP1	cyclin D-type binding-protein 1	2.60
LOC101927285	uncharacterized LOC101927285	2.60
CCDC103	coiled-coil domain containing 103	2.59
ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif, 1	2.59
CD164L2	CD164 sialomucin-like 2	2.58
ABHD14B	abhydrolase domain containing 14B	2.58
RBKS	ribokinase	2.58
PDK3	pyruvate dehydrogenase kinase, isozyme 3	2.57
DSP	desmoplakin	2.57
C17orf58	chromosome 17 open reading frame 58	2.57
ELOVL1	ELOVL fatty acid elongase 1	2.57
KRT8P12	keratin 8 pseudogene 12	2.56
BOK	BCL2-related ovarian killer	2.56
TOM1L1	target of myb1 (chicken)-like 1	2.56
PHLDB3	pleckstrin homology-like domain, family B, member 3	2.56
SDSL	serine dehydratase-like	2.56
TMEM191B	transmembrane protein 191B	2.55
DMXL1	Dmx-like 1	2.55
ITCH	itchy E3 ubiquitin protein ligase	2.55
ZDHHC24	zinc finger, DHHC-type containing 24	2.55
SH3KBP1	SH3-domain kinase binding protein 1	2.55
SH3D19	SH3 domain containing 19	2.55
MROH8	maestro heat-like repeat family member 8	2.55
RBM47	RNA binding motif protein 47	2.54
KRT18	keratin 18	2.54
MT1X	metallothionein 1X	2.54
MLLT4	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4	2.53
PIGV	phosphatidylinositol glycan anchor biosynthesis, class V	2.53
SNTG2	syntrophin, gamma 2	2.53
ITPR1	inositol 1,4,5-trisphosphate receptor, type 1	2.53
GLCE	glucuronic acid epimerase	2.52
SH3TC1	SH3 domain and tetratricopeptide repeats 1	2.52
PTH1R	parathyroid hormone 1 receptor	2.52
RNF208	ring finger protein 208	2.52
C1GALT1	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1	2.52
ARHGEF5	Rho guanine nucleotide exchange factor (GEF) 5	2.52
STT3B	STT3B, subunit of the oligosaccharyltransferase complex (catalytic)	2.52
CTBS	chitobiase, di-N-acetyl-	2.51
TPCN2	two pore segment channel 2	2.51
IFNAR2	interferon (alpha, beta and omega) receptor 2	2.51
TANGO2	transport and golgi organization 2 homolog (Drosophila)	2.51

FUCA2	fucosidase, alpha-L- 2, plasma	2.51
CDK18	cyclin-dependent kinase 18	2.51
MBP	myelin basic protein	2.51
TRMT2B	tRNA methyltransferase 2 homolog B (S. cerevisiae)	2.50
PLAU	plasminogen activator, urokinase	2.50
CAPN5	calpain 5	2.50
ATP6V0B	ATPase, H+ transporting, lysosomal 21kDa, V0 subunit b	2.50
POLM	polymerase (DNA directed), mu	2.50
PRMT6	protein arginine methyltransferase 6	2.50
CCDC85C	coiled-coil domain containing 85C	2.50
PIGS	phosphatidylinositol glycan anchor biosynthesis, class S	2.50
STK36	serine/threonine kinase 36	2.49
ESAM	endothelial cell adhesion molecule	2.49
C9orf171	chromosome 9 open reading frame 171	2.49
TAX1BP1	Tax1 (human T-cell leukemia virus type I) binding protein 1	2.49
PIGO	phosphatidylinositol glycan anchor biosynthesis, class O	2.48
POPDC2	popeye domain containing 2	2.48
KLHL14	kelch-like family member 14	2.48
PAG1	phosphoprotein membrane anchor with glycosphingolipid microdomains 1	2.48
MT1E	metallothionein 1E	2.47
VPS53	vacuolar protein sorting 53 homolog (S. cerevisiae)	2.47
PPP1R26	protein phosphatase 1, regulatory subunit 26	2.47
MTHFS	5,10-methenyltetrahydrofolate synthetase (5-formyltetrahydrofolate cyclo-ligase)	2.47
LOC100270746	uncharacterized LOC100270746	2.47
PIGS	phosphatidylinositol glycan anchor biosynthesis, class S	2.47
NT5DC1	5'-nucleotidase domain containing 1	2.47
KAZN	kazrin, periplakin interacting protein	2.47
TNNI3	troponin I type 3 (cardiac)	2.46
CCZ1	CCZ1 vacuolar protein trafficking and biogenesis associated homolog (S. cerevisiae)	2.46
SQSTM1	sequestosome 1	2.46
MARCH2	membrane-associated ring finger (C3HC4) 2, E3 ubiquitin protein ligase	2.46
PPP1R21	protein phosphatase 1, regulatory subunit 21	2.46
KIAA1804	mixed lineage kinase 4	2.45
NLRX1	NLR family member X1	2.45
ATG16L2	autophagy related 16-like 2 (S. cerevisiae)	2.45
CYB561D2	cytochrome b561 family, member D2	2.44
KIAA0319L	KIAA0319-like	2.44
CCZ1	CCZ1 vacuolar protein trafficking and biogenesis associated homolog (S. cerevisiae)	2.44
GALNS	galactosamine (N-acetyl)-6-sulfate sulfatase	2.44
TBC1D17	TBC1 domain family, member 17	2.43
SLC20A2	solute carrier family 20 (phosphate transporter), member 2	2.43
TMEM106B	transmembrane protein 106B	2.43
DPPA4	developmental pluripotency associated 4	2.43
CELF2	CUGBP, Elav-like family member 2	2.43
SERTAD1	SERTA domain containing 1	2.43
KCTD11	potassium channel tetramerization domain containing 11	2.43
TMEM42	transmembrane protein 42	2.42
AIFM2	apoptosis-inducing factor, mitochondrion-associated, 2	2.42
SIRT5	sirtuin 5	2.42
ARHGAP5-AS1	ARHGAP5 antisense RNA 1 (head to head)	2.42
RELB	v-rel avian reticuloendotheliosis viral oncogene homolog B	2.42
FAH	fumarylacetoacetate hydrolase (fumarylacetoacetase)	2.42
ZBTB10	zinc finger and BTB domain containing 10	2.42
ORAI3	ORAI calcium release-activated calcium modulator 3	2.41
TRPC6	transient receptor potential cation channel, subfamily C, member 6	2.41
CTSLP2	cathepsin L pseudogene 2	2.41
TMEM17	transmembrane protein 17	2.41
WASH1	WAS protein family homolog 1	2.41
GTF3C1	general transcription factor IIIC, polypeptide 1, alpha 220kDa	2.41
TTC30B	tetratricopeptide repeat domain 30B	2.40
AGTRAP	angiotensin II receptor-associated protein	2.40
TMEM63C	transmembrane protein 63C	2.40
JAG1	jagged 1	2.40
SDCCAG8	serologically defined colon cancer antigen 8	2.40
SLC40A1	solute carrier family 40 (iron-regulated transporter), member 1	2.40
EPHX3	epoxide hydrolase 3	2.39
FAM214A	family with sequence similarity 214, member A	2.39
CREBRF	CREB3 regulatory factor	2.39

PHLPP2	PH domain and leucine rich repeat protein phosphatase 2	2.39
FAM212B	family with sequence similarity 212, member B	2.38
DENND1B	DENN/MADD domain containing 1B	2.38
FUCA2	fucosidase, alpha-L- 2, plasma	2.38
AMFR	autocrine motility factor receptor, E3 ubiquitin protein ligase	2.38
CCDC51	coiled-coil domain containing 51	2.38
RNF13	ring finger protein 13	2.38
TRIOBP	TRIO and F-actin binding protein	2.38
CYBA	cytochrome b-245, alpha polypeptide	2.38
POLD4	polymerase (DNA-directed), delta 4, accessory subunit	2.38
PFKFB4	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 4	2.37
ANGPT1	angiopoietin 1	2.37
CACNA1H	calcium channel, voltage-dependent, T type, alpha 1H subunit	2.37
CYHR1	cysteine/histidine-rich 1	2.37
SEC14L1P1	SEC14-like 1 pseudogene 1	2.37
CYP1A2	cytochrome P450, family 1, subfamily A, polypeptide 2	2.37
ATP6AP1L	ATPase, H+ transporting, lysosomal accessory protein 1-like	2.37
LOC283270	uncharacterized LOC283270	2.37
TRMT10A	tRNA methyltransferase 10 homolog A (S. cerevisiae)	2.37
ACBD5	acyl-CoA binding domain containing 5	2.36
HAGH	hydroxyacylglutathione hydrolase	2.36
CYB5D2	cytochrome b5 domain containing 2	2.36
CYSRT1	cysteine-rich tail protein 1	2.36
C1GALT1	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1	2.36
KIRREL3	kin of IRRE like 3 (Drosophila)	2.36
PPP1R9A	protein phosphatase 1, regulatory subunit 9A	2.36
DENND1A	DENN/MADD domain containing 1A	2.35
LOC729887	uncharacterized LOC729887	2.35
ENDOG	endonuclease G	2.35
ACAD10	acyl-CoA dehydrogenase family, member 10	2.35
MMP14	matrix metallopeptidase 14 (membrane-inserted)	2.35
TOR1AIP2	torsin A interacting protein 2	2.35
TMEM143	transmembrane protein 143	2.35
CAMKK1	calcium/calmodulin-dependent protein kinase kinase 1, alpha	2.35
SLC35F5	solute carrier family 35, member F5	2.34
OR7E37P	olfactory receptor, family 7, subfamily E, member 37 pseudogene	2.34
SNX8	sorting nexin 8	2.34
PCK2	phosphoenolpyruvate carboxykinase 2 (mitochondrial)	2.34
PPCS	phosphopantothenoylcysteine synthetase	2.34
RABEPK	Rab9 effector protein with kelch motifs	2.34
GPR137	G protein-coupled receptor 137	2.34
MYOZ3	myozenin 3	2.33
ZNF385A	zinc finger protein 385A	2.33
CCZ1	CCZ1 vacuolar protein trafficking and biogenesis associated homolog (S. cerevisiae)	2.33
PRKAA2	protein kinase, AMP-activated, alpha 2 catalytic subunit	2.33
OR7E47P	olfactory receptor, family 7, subfamily E, member 47 pseudogene	2.33
SERF2	small EDRK-rich factor 2	2.33
MGC4859	uncharacterized LOC79150	2.33
VSX1	visual system homeobox 1	2.32
EXOC8	exocyst complex component 8	2.32
OPLAH	5-oxoprolinase (ATP-hydrolysing)	2.32
MZF1	myeloid zinc finger 1	2.32
SIL1	SIL1 nucleotide exchange factor	2.32
SPPL2A	signal peptide peptidase like 2A	2.32
VCPIP1	valosin containing protein (p97)/p47 complex interacting protein 1	2.32
ESCO1	establishment of sister chromatid cohesion N-acetyltransferase 1	2.32
MRC2	mannose receptor, C type 2	2.32
LRFN4	leucine rich repeat and fibronectin type III domain containing 4	2.32
MIF4GD	MIF4G domain containing	2.32
RPTOR	regulatory associated protein of MTOR, complex 1	2.31
DBP	D site of albumin promoter (albumin D-box) binding protein	2.31
NSUN7	NOP2/Sun domain family, member 7	2.31
TRAPPC6A	trafficking protein particle complex 6A	2.31
GPRC5C	G protein-coupled receptor, class C, group 5, member C	2.31
CPVL	carboxypeptidase, vitellogenic-like	2.30
FGF11	fibroblast growth factor 11	2.30
ARHGAP5-AS1	ARHGAP5 antisense RNA 1 (head to head)	2.30
CMAS	cytidine monophosphate N-acetylneuraminic acid synthetase	2.30
EPS8L2	EPS8-like 2	2.30

ERAP2	endoplasmic reticulum aminopeptidase 2	2.30
NME3	NME/NM23 nucleoside diphosphate kinase 3	2.29
PPP1R21	protein phosphatase 1, regulatory subunit 21	2.29
LRRC10B	leucine rich repeat containing 10B	2.29
FLVCR1	feline leukemia virus subgroup C cellular receptor 1	2.29
RNF14	ring finger protein 14	2.29
PTPRS	protein tyrosine phosphatase, receptor type, S	2.29
ATP6V1C1	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C1	2.28
PRICKLE2	prickle homolog 2 (Drosophila)	2.28
MGST2	microsomal glutathione S-transferase 2	2.28
ACAA1	acetyl-CoA acyltransferase 1	2.28
TRAM2-AS1	TRAM2 antisense RNA 1 (head to head)	2.28
LOC100130093	uncharacterized LOC100130093	2.28
ORC4	origin recognition complex, subunit 4	2.28
KAL1	Kallmann syndrome 1 sequence	2.28
LOC389765	kinesin family member 27 pseudogene	2.28
TOMM34	translocase of outer mitochondrial membrane 34	2.28
NDFIP2	Nedd4 family interacting protein 2	2.27
ORC4	origin recognition complex, subunit 4	2.27
MYOM1	myomesin 1	2.27
CYSRT1	cysteine-rich tail protein 1	2.27
RAB26	RAB26, member RAS oncogene family	2.27
SELT	selenoprotein T	2.27
FBXO9	F-box protein 9	2.27
CCDC30	coiled-coil domain containing 30	2.27
CLIP4	CAP-GLY domain containing linker protein family, member 4	2.27
UQCRB	ubiquinol-cytochrome c reductase binding protein	2.26
LINC00087	long intergenic non-protein coding RNA 87	2.26
RHBDD2	rhomboid domain containing 2	2.26
PAG1	phosphoprotein membrane anchor with glycosphingolipid microdomains 1	2.26
TMED4	transmembrane emp24 protein transport domain containing 4	2.25
LAD1	ladinin 1	2.25
SELT	selenoprotein T	2.25
CLPTM1	cleft lip and palate associated transmembrane protein 1	2.25
TTC12	tetratricopeptide repeat domain 12	2.25
FHIT	fragile histidine triad	2.25
LANCL3	LanC lantibiotic synthetase component C-like 3 (bacterial)	2.25
SLC30A3	solute carrier family 30 (zinc transporter), member 3	2.25
LOC100131564	uncharacterized LOC100131564	2.24
HCST	hematopoietic cell signal transducer	2.24
LINC00847	long intergenic non-protein coding RNA 847	2.24
FBXL17	F-box and leucine-rich repeat protein 17	2.24
CCNL2	cyclin L2	2.24
LOC100130027	uncharacterized LOC100130027	2.24
POMT2	protein-O-mannosyltransferase 2	2.24
MLLT4	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4	2.24
HEXA	hexosaminidase A (alpha polypeptide)	2.24
LRFN4	leucine rich repeat and fibronectin type III domain containing 4	2.24
DSP	desmoplakin	2.24
HPS1	Hermansky-Pudlak syndrome 1	2.24
PAOX	polyamine oxidase (exo-N4-amino)	2.24
UBL3	ubiquitin-like 3	2.24
GAA	glucosidase, alpha; acid	2.23
ERBB2IP	erbb2 interacting protein	2.23
YAF2	YY1 associated factor 2	2.22
SLC25A4	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 4	2.22
RREB1	ras responsive element binding protein 1	2.22
JKAMP	JNK1/MAPK8-associated membrane protein	2.22
FIGN	fidgetin	2.22
PRR5-ARHGAP8	PRR5-ARHGAP8 readthrough	2.22
RRM2B	ribonucleotide reductase M2 B (TP53 inducible)	2.22
TMEM201	transmembrane protein 201	2.22
LINC01125	long intergenic non-protein coding RNA 1125	2.21
DIRC2	disrupted in renal carcinoma 2	2.21
SRCRB4D	scavenger receptor cysteine rich domain containing, group B (4 domains)	2.21

LRIG2	leucine-rich repeats and immunoglobulin-like domains 2	2.21
SCUBE1	signal peptide, CUB domain, EGF-like 1	2.21
EMC10	ER membrane protein complex subunit 10	2.21
CBLN3	cerebellin 3 precursor	2.21
ERC2	ELKS/RAB6-interacting/CAST family member 2	2.21
ATP6V1C1	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C1	2.21
LITAF	lipopolysaccharide-induced TNF factor	2.21
MLLT4	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4	2.21
LIFR	leukemia inhibitory factor receptor alpha	2.21
PPT2	palmitoyl-protein thioesterase 2	2.21
PYROXD2	pyridine nucleotide-disulphide oxidoreductase domain 2	2.21
CCHCR1	coiled-coil alpha-helical rod protein 1	2.20
HOXA7	homeobox A7	2.20
LCLAT1	lysocardiolipin acyltransferase 1	2.20
LOC642852	uncharacterized LOC642852	2.20
KLF16	Kruppel-like factor 16	2.20
SH3D21	SH3 domain containing 21	2.20
LIPT2	lipoyl(octanoyl) transferase 2 (putative)	2.20
KLK1	kallikrein 1	2.20
NDRG1	N-myc downstream regulated 1	2.19
TMEM107	transmembrane protein 107	2.19
NAV2	neuron navigator 2	2.19
CTBS	chitobiase, di-N-acetyl-	2.19
GAREM	GRB2 associated, regulator of MAPK1	2.19
LINC01144	long intergenic non-protein coding RNA 1144	2.19
CERS2	ceramide synthase 2	2.19
NIPSNAP3A	nipsnap homolog 3A (C. elegans)	2.19
SIRT5	sirtuin 5	2.19
LOC441204	uncharacterized LOC441204	2.19
DGKQ	diacylglycerol kinase, theta 110kDa	2.19
ALDH5A1	aldehyde dehydrogenase 5 family, member A1	2.18
PPP1R13B	protein phosphatase 1, regulatory subunit 13B	2.18
TMEM169	transmembrane protein 169	2.18
ECHDC3	enoyl CoA hydratase domain containing 3	2.18
NEU1	sialidase 1 (lysosomal sialidase)	2.18
GINM1	glycoprotein integral membrane 1	2.18
MED14OS	MED14 opposite strand	2.18
TMEM38A	transmembrane protein 38A	2.18
RNPEPL1	arginyl aminopeptidase (aminopeptidase B)-like 1	2.17
KIAA1161	KIAA1161	2.17
PPP3CC	protein phosphatase 3, catalytic subunit, gamma isozyme	2.17
ARID3A	AT rich interactive domain 3A (BRIGHT-like)	2.17
EFCAB2	EF-hand calcium binding domain 2	2.17
ACOT8	acyl-CoA thioesterase 8	2.17
HEYL	hes-related family bHLH transcription factor with YRPW motif-like	2.16
FUOM	fucose mutarotase	2.16
LCOR	ligand dependent nuclear receptor corepressor	2.16
CYB561D1	cytochrome b561 family, member D1	2.16
C21orf2	chromosome 21 open reading frame 2	2.16
KLHL21	kelch-like family member 21	2.16
WDR78	WD repeat domain 78	2.16
VANGL1	VANGL planar cell polarity protein 1	2.16
ANXA2P1	annexin A2 pseudogene 1	2.15
ZBED6CL	ZBED6 C-terminal like	2.15
SCRN2	secernin 2	2.15
PRKAA1	protein kinase, AMP-activated, alpha 1 catalytic subunit	2.15
SMIM11	small integral membrane protein 11	2.15
GPR108	G protein-coupled receptor 108	2.15
COMMD8	COMM domain containing 8	2.14
SGTB	small glutamine-rich tetratricopeptide repeat (TPR)-containing, beta	2.14
KIRREL2	kin of IRRE like 2 (Drosophila)	2.14
ZNF148	zinc finger protein 148	2.14
HOOK1	hook microtubule-tethering protein 1	2.13
IQCA1	IQ motif containing with AAA domain 1	2.13
PTCD3	pentatricopeptide repeat domain 3	2.13
EBAG9	estrogen receptor binding site associated, antigen, 9	2.13
DCUN1D2	DCN1, defective in cullin neddylation 1, domain containing 2	2.13
UNC119	unc-119 homolog (C. elegans)	2.12
PSMD3	proteasome (prosome, macropain) 26S subunit, non-ATPase, 3	2.12

TRAK1	trafficking protein, kinesin binding 1	2.12
EVA1A	eva-1 homolog A (C. elegans)	2.12
PITRM1	pitrilysin metallopeptidase 1	2.12
MSMO1	methylsterol monooxygenase 1	2.12
DNAJC11	DnaJ (Hsp40) homolog, subfamily C, member 11	2.12
PCNX	pecanex homolog (Drosophila)	2.12
IMPAD1	inositol monophosphatase domain containing 1	2.12
ENDOV	endonuclease V	2.12
IQCA1	IQ motif containing with AAA domain 1	2.12
GGA2	golgi-associated, gamma adaptin ear containing, ARF binding protein 2	2.11
FBXL17	F-box and leucine-rich repeat protein 17	2.11
CXXC4	CXXC finger protein 4	2.11
SLC39A11	solute carrier family 39, member 11	2.11
UFSP1	UFM1-specific peptidase 1 (non-functional)	2.11
LOC100133985	uncharacterized LOC100133985	2.11
LRRC73	leucine rich repeat containing 73	2.10
AUH	AU RNA binding protein/enoyl-CoA hydratase	2.10
PDE9A	phosphodiesterase 9A	2.10
GIN1	gypsy retrotransposon integrase 1	2.10
ZNF14	zinc finger protein 14	2.10
LRPAP1	low density lipoprotein receptor-related protein associated protein 1	2.10
TMEM129	transmembrane protein 129	2.10
IARS2	isoleucyl-tRNA synthetase 2, mitochondrial	2.10
DNAJC3	DnaJ (Hsp40) homolog, subfamily C, member 3	2.10
UBXN6	UBX domain protein 6	2.09
ZNF577	zinc finger protein 577	2.09
LRRTM1	leucine rich repeat transmembrane neuronal 1	2.09
HPS1	Hermansky-Pudlak syndrome 1	2.09
LOC101927974	uncharacterized LOC101927974	2.09
COMMD8	COMM domain containing 8	2.09
CELF2	CUGBP, Elav-like family member 2	2.09
KLK8	kallikrein-related peptidase 8	2.09
MAFG	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog G	2.09
TMEM125	transmembrane protein 125	2.09
GSTM4	glutathione S-transferase mu 4	2.08
WIPI1	WD repeat domain, phosphoinositide interacting 1	2.08
GLB1L	galactosidase, beta 1-like	2.08
TEX264	testis expressed 264	2.08
MYL5	myosin, light chain 5, regulatory	2.08
SMUG1	single-strand-selective monofunctional uracil-DNA glycosylase 1	2.08
TTC12	tetratricopeptide repeat domain 12	2.08
PTDSS2	phosphatidylserine synthase 2	2.08
C1orf56	chromosome 1 open reading frame 56	2.08
COX14	cytochrome c oxidase assembly homolog 14 (S. cerevisiae)	2.08
TMED7-TICAM2	TMED7-TICAM2 readthrough	2.08
BBX	bobby sox homolog (Drosophila)	2.08
LRRC41	leucine rich repeat containing 41	2.07
APOPT1	apoptogenic 1, mitochondrial	2.07
PLA2G16	phospholipase A2, group XVI	2.07
C7orf55	chromosome 7 open reading frame 55	2.07
CITED4	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 4	2.07
SCNN1A	sodium channel, non-voltage-gated 1 alpha subunit	2.07
PDDC1	Parkinson disease 7 domain containing 1	2.07
BSG	basigin (Ok blood group)	2.06
TTC32	tetratricopeptide repeat domain 32	2.06
FBXL3	F-box and leucine-rich repeat protein 3	2.06
LOC441081	POM121 membrane glycoprotein (rat) pseudogene	2.06
OR7E156P	olfactory receptor, family 7, subfamily E, member 156 pseudogene	2.06
LOC100128398	uncharacterized LOC100128398	2.06
LOC730101	uncharacterized LOC730101	2.06
HS6ST2	heparan sulfate 6-O-sulfotransferase 2	2.06
BBX	bobby sox homolog (Drosophila)	2.06
SNX4	sorting nexin 4	2.06
KLHL25	kelch-like family member 25	2.06
HS6ST1	heparan sulfate 6-O-sulfotransferase 1	2.06
KRT8	keratin 8	2.06

MAP3K8	mitogen-activated protein kinase kinase kinase 8	2.05
RNF170	ring finger protein 170	2.05
SAT1	spermidine/spermine N1-acetyltransferase 1	2.05
LOC101928837	uncharacterized LOC101928837	2.05
MB21D2	Mab-21 domain containing 2	2.05
FUK	fucokinase	2.05
DAZAP2	DAZ associated protein 2	2.05
CORO2A	coronin, actin binding protein, 2A	2.04
ANKRD13C	ankyrin repeat domain 13C	2.04
ATOX1	antioxidant 1 copper chaperone	2.04
KBTBD3	kelch repeat and BTB (POZ) domain containing 3	2.04
TRMT2B	tRNA methyltransferase 2 homolog B (S. cerevisiae)	2.04
IGSF1	immunoglobulin superfamily, member 1	2.04
LURAP1L	leucine rich adaptor protein 1-like	2.04
SLC17A5	solute carrier family 17 (acidic sugar transporter), member 5	2.04
ANKRD13A	ankyrin repeat domain 13A	2.04
LINC00467	long intergenic non-protein coding RNA 467	2.03
PRKCZ	protein kinase C, zeta	2.03
RAB14	RAB14, member RAS oncogene family	2.03
FAM174A	family with sequence similarity 174, member A	2.03
MCFD2	multiple coagulation factor deficiency 2	2.03
EMC10	ER membrane protein complex subunit 10	2.03
NFKBIE	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon	2.03
LMBRD1	LMBR1 domain containing 1	2.03
TXNDC11	thioredoxin domain containing 11	2.02
HSD17B14	hydroxysteroid (17-beta) dehydrogenase 14	2.02
UBR3	ubiquitin protein ligase E3 component n-recognin 3 (putative)	2.02
MYC	v-myc avian myelocytomatosis viral oncogene homolog	2.02
LCA5	Leber congenital amaurosis 5	2.02
CST3	cystatin C	2.02
TMEM205	transmembrane protein 205	2.02
SLC9A8	solute carrier family 9, subfamily A (NHE8, cation proton antiporter 8), member 8	2.02
DNPH1	2'-deoxynucleoside 5'-phosphate N-hydrolase 1	2.02
FBLN2	fibulin 2	2.02
UFSP1	UFM1-specific peptidase 1 (non-functional)	2.02
GBA	glucosidase, beta, acid	2.01
IDH3A	isocitrate dehydrogenase 3 (NAD+) alpha	2.01
TMBIM4	transmembrane BAX inhibitor motif containing 4	2.01
WDFY3-AS2	WDFY3 antisense RNA 2	2.01
MAP3K2	mitogen-activated protein kinase kinase kinase 2	2.01
ERLEC1	endoplasmic reticulum lectin 1	2.01
UBXN4	UBX domain protein 4	2.01
TRAK1	trafficking protein, kinesin binding 1	2.01
C9orf9	chromosome 9 open reading frame 9	2.00
VTI1A	vesicle transport through interaction with t-SNAREs 1A	2.00
BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3	2.00
C5orf28	chromosome 5 open reading frame 28	2.00
TMEM259	transmembrane protein 259	2.00
PRELID2	PRELI domain containing 2	2.00
FBXO16	F-box protein 16	2.00
HMGCS1	3-hydroxy-3-methylglutaryl-CoA synthase 1 (soluble)	2.00
NAPEPLD	N-acyl phosphatidylethanolamine phospholipase D	2.00
GOLGA4	golgin A4	2.00
C18orf8	chromosome 18 open reading frame 8	2.00
SLC25A23	solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 23	2.00
C1orf186	chromosome 1 open reading frame 186	1.99
SLC39A13	solute carrier family 39 (zinc transporter), member 13	1.99
SOWAHC	sosondowah ankyrin repeat domain family member C	1.99
FAM134A	family with sequence similarity 134, member A	1.99
GINM1	glycoprotein integral membrane 1	1.99
EFNA1	ephrin-A1	1.99
PIGQ	phosphatidylinositol glycan anchor biosynthesis, class Q	1.99
TP53I11	tumor protein p53 inducible protein 11	1.99
SAT1	spermidine/spermine N1-acetyltransferase 1	1.99
EXOC6	exocyst complex component 6	1.98
MBTPS2	membrane-bound transcription factor peptidase, site 2	1.98
WASH1	WAS protein family homolog 1	1.98
ARSA	arylsulfatase A	1.98

TRNT1	tRNA nucleotidyl transferase, CCA-adding, 1	1.98
NIPAL3	NIPA-like domain containing 3	1.98
RALGPS1	Ral GEF with PH domain and SH3 binding motif 1	1.98
NICN1	nicolin 1	1.98
ANKRD10	ankyrin repeat domain 10	1.97
THAP6	THAP domain containing 6	1.97
PCYOX1	prenylcysteine oxidase 1	1.97
LOC728705	uncharacterized LOC728705	1.97
DNAJC16	DnaJ (Hsp40) homolog, subfamily C, member 16	1.97
DIRC2	disrupted in renal carcinoma 2	1.97
TMEM150A	transmembrane protein 150A	1.96
ZFYVE21	zinc finger, FYVE domain containing 21	1.96
PDK4	pyruvate dehydrogenase kinase, isozyme 4	1.96
PLA2G12A	phospholipase A2, group XIIA	1.96
ESRP2	epithelial splicing regulatory protein 2	1.95
PCED1A	PC-esterase domain containing 1A	1.95
ZBED9	zinc finger, BED-type containing 9	1.95
MICU2	mitochondrial calcium uptake 2	1.95
TSPAN9	tetraspanin 9	1.95
NAIF1	nuclear apoptosis inducing factor 1	1.95
MYCN	v-myc avian myelocytomatosis viral oncogene neuroblastoma derived homolog	1.95
FBXO17	F-box protein 17	1.95
ZFHX2	zinc finger homeobox 2	1.95
KIAA1468	KIAA1468	1.95
ATP6V1H	ATPase, H+ transporting, lysosomal 50/57kDa, V1 subunit H	1.95
C18orf25	chromosome 18 open reading frame 25	1.95
SLC3A2	solute carrier family 3 (amino acid transporter heavy chain), member 2	1.95
ZNF226	zinc finger protein 226	1.95
FBXL17	F-box and leucine-rich repeat protein 17	1.95
ATP6V0D1	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d1	1.94
ANKRA2	ankyrin repeat, family A (RFXANK-like), 2	1.94
FLJ37453	uncharacterized LOC729614	1.94
TMEM18	transmembrane protein 18	1.94
IQCD	IQ motif containing D	1.94
PYROXD1	pyridine nucleotide-disulphide oxidoreductase domain 1	1.94
SMOC2	SPARC related modular calcium binding 2	1.94
USP6NL	USP6 N-terminal like	1.94
NR1H2	nuclear receptor subfamily 1, group H, member 2	1.94
ASB10	ankyrin repeat and SOCS box containing 10	1.94
NADSYN1	NAD synthetase 1	1.94
SFT2D2	SFT2 domain containing 2	1.94
HECTD2	HECT domain containing E3 ubiquitin protein ligase 2	1.94
STRBP	spermatid perinuclear RNA binding protein	1.94
MARVELD2	MARVEL domain containing 2	1.93
ZBTB20	zinc finger and BTB domain containing 20	1.93
TNRC6C	trinucleotide repeat containing 6C	1.93
NAPA	N-ethylmaleimide-sensitive factor attachment protein, alpha	1.93
NPAS3	neuronal PAS domain protein 3	1.93
ARFGEF2	ADP-ribosylation factor guanine nucleotide-exchange factor 2 (brefeldin A-inhibited)	1.93
STAG3	stromal antigen 3	1.93
OCEL1	occludin/ELL domain containing 1	1.93
CENPBD1	CENPB DNA-binding domains containing 1	1.93
LRPPRC	leucine-rich pentatricopeptide repeat containing	1.93
PITRM1	pitrilysin metallopeptidase 1	1.92
RNASEH2C	ribonuclease H2, subunit C	1.92
TMX3	thioredoxin-related transmembrane protein 3	1.92
BNIP3L	BCL2/adenovirus E1B 19kDa interacting protein 3-like	1.92
SLBP	stem-loop binding protein	1.92
TMEM115	transmembrane protein 115	1.92
C14orf37	chromosome 14 open reading frame 37	1.92
ABCD1	ATP-binding cassette, sub-family D (ALD), member 1	1.92
LRRC41	leucine rich repeat containing 41	1.92
PRKCD	protein kinase C, delta	1.92
SPTSSA	serine palmitoyltransferase, small subunit A	1.92
PCYOX1	prenylcysteine oxidase 1	1.92
HEXDC	hexosaminidase (glycosyl hydrolase family 20, catalytic domain) containing	1.92
LOC148413	uncharacterized LOC148413	1.91
SLC39A10	solute carrier family 39 (zinc transporter), member 10	1.91
THBS3	thrombospondin 3	1.91
ECE1	endothelin converting enzyme 1	1.91

PLEKHM1	pleckstrin homology domain containing, family M (with RUN domain) member 1	1.91
CASC4	cancer susceptibility candidate 4	1.91
RTN3	reticulon 3	1.91
TMEM161A	transmembrane protein 161A	1.91
BEND3	BEN domain containing 3	1.91
PCED1A	PC-esterase domain containing 1A	1.91
LOC100129550	uncharacterized LOC100129550	1.91
GKAP1	G kinase anchoring protein 1	1.90
SLC35B3	solute carrier family 35 (adenosine 3'-phospho 5'-phosphosulfate transporter), member B3	1.90
C6orf226	chromosome 6 open reading frame 226	1.90
MARCH9	membrane-associated ring finger (C3HC4) 9	1.90
GBAP1	glucosidase, beta, acid pseudogene 1	1.90
EDEM3	ER degradation enhancer, mannosidase alpha-like 3	1.90
TOMM34	translocase of outer mitochondrial membrane 34	1.90
FUCA1	fucosidase, alpha-L- 1, tissue	1.90
ASH1L-AS1	ASH1L antisense RNA 1	1.90
LRRC23	leucine rich repeat containing 23	1.90
OPA3	optic atrophy 3 (autosomal recessive, with chorea and spastic paraplegia)	1.90
PLEKHG4	pleckstrin homology domain containing, family G (with RhoGef domain) member 4	1.90
TTYH2	tweety family member 2	1.90
TEAD3	TEA domain family member 3	1.89
TMEM106B	transmembrane protein 106B	1.89
HOXA-AS3	HOXA cluster antisense RNA 3	1.89
THEM4	thioesterase superfamily member 4	1.89
C6orf226	chromosome 6 open reading frame 226	1.89
CRYZ	crystallin, zeta (quinone reductase)	1.89
TMF1	TATA element modulatory factor 1	1.89
ABHD12	abhydrolase domain containing 12	1.89
QPRT	quinolinate phosphoribosyltransferase	1.89
SLX1A	SLX1 structure-specific endonuclease subunit homolog A (S. cerevisiae)	1.89
TMEM175	transmembrane protein 175	1.89
TCAIM	T cell activation inhibitor, mitochondrial	1.89
LYPLAL1	lysophospholipase-like 1	1.89
CFL2	cofilin 2 (muscle)	1.89
LOH12CR2	loss of heterozygosity, 12, chromosomal region 2 (non-protein coding)	1.89
TMEM38B	transmembrane protein 38B	1.88
SUMF2	sulfatase modifying factor 2	1.88
SCAMP2	secretory carrier membrane protein 2	1.88
CMTM6	CKLF-like MARVEL transmembrane domain containing 6	1.88
MAP3K2	mitogen-activated protein kinase kinase kinase 2	1.88
NPW	neuropeptide W	1.88
MRM1	mitochondrial rRNA methyltransferase 1 homolog (S. cerevisiae)	1.88
PPP2CB	protein phosphatase 2, catalytic subunit, beta isozyme	1.88
RAB7A	RAB7A, member RAS oncogene family	1.88
PURA	purine-rich element binding protein A	1.88
C16orf58	chromosome 16 open reading frame 58	1.87
BOLA1	bolA family member 1	1.87
PTK2B	protein tyrosine kinase 2 beta	1.87
SLC39A4	solute carrier family 39 (zinc transporter), member 4	1.87
NFATC2IP	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacting protein	1.87
EDEM2	ER degradation enhancer, mannosidase alpha-like 2	1.87
SP6	Sp6 transcription factor	1.87
ATHL1	ATH1, acid trehalase-like 1 (yeast)	1.87
CANX	calnexin	1.87
NDOR1	NADPH dependent diflavin oxidoreductase 1	1.87
ENOSF1	enolase superfamily member 1	1.87
ATP6V1D	ATPase, H+ transporting, lysosomal 34kDa, V1 subunit D	1.87
HLCS	holocarboxylase synthetase (biotin-(proprionyl-CoA-carboxylase (ATP-hydrolysing)) ligase)	1.87
GRINA	glutamate receptor, ionotropic, N-methyl D-aspartate-associated protein 1 (glutamate binding)	1.87
MAFG	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog G	1.87
FAM213A	family with sequence similarity 213, member A	1.87
C10orf54	chromosome 10 open reading frame 54	1.87
SIRT7	sirtuin 7	1.86
SLC36A1	solute carrier family 36 (proton/amino acid symporter), member 1	1.86
NUPR1L	nuclear protein, transcriptional regulator, 1-like	1.86
JMY	junction mediating and regulatory protein, p53 cofactor	1.86
CREG1	cellular repressor of E1A-stimulated genes 1	1.86
FAM213A	family with sequence similarity 213, member A	1.86

CENPBD1P1	CENPBD1 pseudogene 1	1.86
CNTFR	ciliary neurotrophic factor receptor	1.86
MAGIX	MAGI family member, X-linked	1.86
ZCCHC2	zinc finger, CCHC domain containing 2	1.86
DVL1	dishevelled segment polarity protein 1	1.86
TMEM19	transmembrane protein 19	1.86
KDSR	3-ketodihydrosphingosine reductase	1.86
RRAGB	Ras-related GTP binding B	1.85
SLC25A42	solute carrier family 25, member 42	1.85
ALDH9A1	aldehyde dehydrogenase 9 family, member A1	1.85
CIB1	calcium and integrin binding 1 (calmyrin)	1.85
LOH12CR2	loss of heterozygosity, 12, chromosomal region 2 (non-protein coding)	1.85
GPR143	G protein-coupled receptor 143	1.85
BMP2K	BMP2 inducible kinase	1.85
HOOK1	hook microtubule-tethering protein 1	1.85
UGT2B11	UDP glucuronosyltransferase 2 family, polypeptide B11	1.85
ZBTB42	zinc finger and BTB domain containing 42	1.85
B4GALT4	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 4	1.85
RBM7	RNA binding motif protein 7	1.84
C14orf37	chromosome 14 open reading frame 37	1.84
WDR45	WD repeat domain 45	1.84
RNF14	ring finger protein 14	1.84
HSD17B7	hydroxysteroid (17-beta) dehydrogenase 7	1.84
TADA2B	transcriptional adaptor 2B	1.84
PHLDB1	pleckstrin homology-like domain, family B, member 1	1.84
GNS	glucosamine (N-acetyl)-6-sulfatase	1.84
CMTM3	CKLF-like MARVEL transmembrane domain containing 3	1.84
TMX1	thioredoxin-related transmembrane protein 1	1.84
ATP6AP2	ATPase, H+ transporting, lysosomal accessory protein 2	1.83
ATG10	autophagy related 10	1.83
PSME4	proteasome (prosome, macropain) activator subunit 4	1.83
SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	1.83
TRAPPC9	trafficking protein particle complex 9	1.83
TCN2	transcobalamin II	1.83
CENPBD1	CENPB DNA-binding domains containing 1	1.83
SUV420H2	suppressor of variegation 4-20 homolog 2 (Drosophila)	1.83
NUDT12	nudix (nucleoside diphosphate linked moiety X)-type motif 12	1.83
PAN3	PAN3 poly(A) specific ribonuclease subunit	1.83
LINC00998	long intergenic non-protein coding RNA 998	1.83
VTI1A	vesicle transport through interaction with t-SNAREs 1A	1.83
POMT1	protein-O-mannosyltransferase 1	1.83
PSME4	proteasome (prosome, macropain) activator subunit 4	1.82
BLOC1S3	biogenesis of lysosomal organelles complex-1, subunit 3	1.82
RAB11FIP4	RAB11 family interacting protein 4 (class II)	1.82
CMTM3	CKLF-like MARVEL transmembrane domain containing 3	1.82
LOC100128498	uncharacterized LOC100128498	1.82
ARSK	arylsulfatase family, member K	1.82
RBPMS2	RNA binding protein with multiple splicing 2	1.82
WDR13	WD repeat domain 13	1.82
HIST3H2A	histone cluster 3, H2a	1.82
RPL23AP7	ribosomal protein L23a pseudogene 7	1.82
KIF12	kinesin family member 12	1.82
HOXA-AS3	HOXA cluster antisense RNA 3	1.82
SERINC1	serine incorporator 1	1.82
DNPEP	aspartyl aminopeptidase	1.82
CXXC5	CXXC finger protein 5	1.81
TTC28-AS1	TTC28 antisense RNA 1	1.81
MEGF8	multiple EGF-like-domains 8	1.81
ASH1L-AS1	ASH1L antisense RNA 1	1.81
CYB5R1	cytochrome b5 reductase 1	1.81
MANEA	mannosidase, endo-alpha	1.81
SLMO2	slowmo homolog 2 (Drosophila)	1.81
CCDC103	coiled-coil domain containing 103	1.81
ZNF444	zinc finger protein 444	1.81
HSD17B7	hydroxysteroid (17-beta) dehydrogenase 7	1.81
DIS3L2	DIS3 like 3'-5' exoribonuclease 2	1.81
DSTN	destrin (actin depolymerizing factor)	1.81
KLF13	Kruppel-like factor 13	1.81

GMPR2	guanosine monophosphate reductase 2	1.80
KLF10	Kruppel-like factor 10	1.80
HSPA5	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	1.80
SHKBP1	SH3KBP1 binding protein 1	1.80
MAF	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog	1.80
PHLDB1	pleckstrin homology-like domain, family B, member 1	1.80
SPOPL	speckle-type POZ protein-like	1.80
MFSD9	major facilitator superfamily domain containing 9	1.80
THEM4	thioesterase superfamily member 4	1.80
FAM3A	family with sequence similarity 3, member A	1.80
IDNK	idnK, gluconokinase homolog (E. coli)	1.80
SIRT7	sirtuin 7	1.80
HS6ST2	heparan sulfate 6-O-sulfotransferase 2	1.80
CASP10	caspase 10, apoptosis-related cysteine peptidase	1.80
ATG2A	autophagy related 2A	1.80
CDH6	cadherin 6, type 2, K-cadherin (fetal kidney)	1.80
LRTOMT	leucine rich transmembrane and O-methyltransferase domain containing	1.80
OR7E24	olfactory receptor, family 7, subfamily E, member 24	1.80
ZNF789	zinc finger protein 789	1.79
IGSF1	immunoglobulin superfamily, member 1	1.79
ZBTB46	zinc finger and BTB domain containing 46	1.79
TRIOBP	TRIO and F-actin binding protein	1.79
PAFAH2	platelet-activating factor acetylhydrolase 2, 40kDa	1.79
PIGH	phosphatidylinositol glycan anchor biosynthesis, class H	1.79
USP37	ubiquitin specific peptidase 37	1.79
MFSD1	major facilitator superfamily domain containing 1	1.79
TMEM141	transmembrane protein 141	1.79
SNX24	sorting nexin 24	1.79
ERLEC1	endoplasmic reticulum lectin 1	1.79
FAM199X	family with sequence similarity 199, X-linked	1.79
LYRM2	LYR motif containing 2	1.79
DHRS11	dehydrogenase/reductase (SDR family) member 11	1.79
TSPAN31	tetraspanin 31	1.79
FAM228B	family with sequence similarity 228, member B	1.79
UGT2B10	UDP glucuronosyltransferase 2 family, polypeptide B10	1.79
TNFRSF1A	tumor necrosis factor receptor superfamily, member 1A	1.79
POLR2E	polymerase (RNA) II (DNA directed) polypeptide E, 25kDa	1.79
ENKD1	enkurin domain containing 1	1.79
KCNJ16	potassium inwardly-rectifying channel, subfamily J, member 16	1.79
PICK1	protein interacting with PRKCA 1	1.78
RTN4R	reticulon 4 receptor	1.78
DVL1	dishevelled segment polarity protein 1	1.78
SLAIN1	SLAIN motif family, member 1	1.78
CAPNS1	calpain, small subunit 1	1.78
HSD17B12	hydroxysteroid (17-beta) dehydrogenase 12	1.78
SRGAP2B	SLIT-ROBO Rho GTPase activating protein 2B	1.78
RNF11	ring finger protein 11	1.78
SENP5	SUMO1/sentrin specific peptidase 5	1.78
FAM71E1	family with sequence similarity 71, member E1	1.78
LMBR1	limb development membrane protein 1	1.78
PRR5	proline rich 5 (renal)	1.77
PDIA3	protein disulfide isomerase family A, member 3	1.77
PIGQ	phosphatidylinositol glycan anchor biosynthesis, class Q	1.77
VCPIP1	valosin containing protein (p97)/p47 complex interacting protein 1	1.77
LINC00908	long intergenic non-protein coding RNA 908	1.77
ZSWIM8	zinc finger, SWIM-type containing 8	1.77
PRDX3	peroxiredoxin 3	1.77
FOXP1	forkhead box P1	1.77
LINC00998	long intergenic non-protein coding RNA 998	1.77
MFSD10	major facilitator superfamily domain containing 10	1.77
LINC00467	long intergenic non-protein coding RNA 467	1.77
LAMB2P1	laminin, beta 2 pseudogene 1	1.77
GP1BB	glycoprotein Ib (platelet), beta polypeptide	1.77
NHLRC4	NHL repeat containing 4	1.77
PNPO	pyridoxamine 5'-phosphate oxidase	1.77
TCP10L	t-complex 10-like	1.77
FBXO15	F-box protein 15	1.77
FOXO6	forkhead box O6	1.77
C7orf13	chromosome 7 open reading frame 13	1.77
ZSCAN1	zinc finger and SCAN domain containing 1	1.77

VTI1A	vesicle transport through interaction with t-SNAREs 1A	1.77
TTC7A	tetratricopeptide repeat domain 7A	1.77
KIAA1919	KIAA1919	1.77
ADD3	adducin 3 (gamma)	1.76
CYB561A3	cytochrome b561 family, member A3	1.76
SC5D	sterol-C5-desaturase	1.76
POMGNT1	protein O-linked mannose N-acetylglucosaminyltransferase 1 (beta 1,2-)	1.76
TMED1	transmembrane emp24 protein transport domain containing 1	1.76
ATG2A	autophagy related 2A	1.76
PXK	PX domain containing serine/threonine kinase	1.76
CTTN	cortactin	1.76
SERGEF	secretion regulating guanine nucleotide exchange factor	1.76
IPP	intracisternal A particle-promoted polypeptide	1.76
GMPR2	guanosine monophosphate reductase 2	1.76
EDEM3	ER degradation enhancer, mannosidase alpha-like 3	1.76
FAM122B	family with sequence similarity 122B	1.76
SPSB1	splA/ryanodine receptor domain and SOCS box containing 1	1.76
MAP1LC3B P1	microtubule-associated protein 1 light chain 3 beta pseudogene 1	1.76
WDR34	WD repeat domain 34	1.76
LARP1B	La ribonucleoprotein domain family, member 1B	1.76
ALG2	ALG2, alpha-1,3/1,6-mannosyltransferase	1.76
CHMP1B	charged multivesicular body protein 1B	1.76
PTS	6-pyruvoyltetrahydropterin synthase	1.75
POMGNT1	protein O-linked mannose N-acetylglucosaminyltransferase 1 (beta 1,2-)	1.75
NUDT14	nudix (nucleoside diphosphate linked moiety X)-type motif 14	1.75
OMA1	OMA1 zinc metallopeptidase	1.75
GSTK1	glutathione S-transferase kappa 1	1.75
LDLR	low density lipoprotein receptor	1.75
NT5C	5', 3'-nucleotidase, cytosolic	1.75
DIS3L	DIS3 like exosome 3'-5' exoribonuclease	1.75
LOC283861	uncharacterized LOC283861	1.75
VPS36	vacuolar protein sorting 36 homolog (S. cerevisiae)	1.75
TM9SF2	transmembrane 9 superfamily member 2	1.75
NSUN5	NOP2/Sun domain family, member 5	1.75
IER3IP1	immediate early response 3 interacting protein 1	1.75
ARL3	ADP-ribosylation factor-like 3	1.75
TWSG1	twisted gastrulation BMP signaling modulator 1	1.75
SLC25A10	solute carrier family 25 (mitochondrial carrier; dicarboxylate transporter), member 10	1.75
THTPA	thiamine triphosphatase	1.75
SHB	Src homology 2 domain containing adaptor protein B	1.75
BCAR1	breast cancer anti-estrogen resistance 1	1.75
QSOX2	quiescin Q6 sulfhydryl oxidase 2	1.75
TMBIM4	transmembrane BAX inhibitor motif containing 4	1.75
BNIP3L	BCL2/adenovirus E1B 19kDa interacting protein 3-like	1.75
LOC644727	uncharacterized LOC644727	1.74
ATPIF1	ATPase inhibitory factor 1	1.74
MOB3B	MOB kinase activator 3B	1.74
B9D2	B9 protein domain 2	1.74
ZNF655	zinc finger protein 655	1.74
GP1BB	glycoprotein Ib (platelet), beta polypeptide	1.74
ATAD1	ATPase family, AAA domain containing 1	1.74
ACTR1B	ARP1 actin-related protein 1 homolog B, centractin beta (yeast)	1.74
ANXA7	annexin A7	1.74
ZNF469	zinc finger protein 469	1.74
MAP9	microtubule-associated protein 9	1.74
SRRM2-AS1	SRRM2 antisense RNA 1	1.74
SLC22A23	solute carrier family 22, member 23	1.74
PPP2R4	protein phosphatase 2A activator, regulatory subunit 4	1.74
TSTD3	thiosulfate sulfurtransferase (rhodanese)-like domain containing 3	1.74
ZC3H6	zinc finger CCCH-type containing 6	1.74
RINL	Ras and Rab interactor-like	1.74
NPHP3	nephronophthisis 3 (adolescent)	1.74
SLC25A20	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	1.73
TTC8	tetratricopeptide repeat domain 8	1.73
MRS2	MRS2 magnesium transporter	1.73
L3HYPDH	L-3-hydroxyproline dehydratase (trans-)	1.73
CCT6B	chaperonin containing TCP1, subunit 6B (zeta 2)	1.73
AHCYL1	adenosylhomocysteinase-like 1	1.73

B3GAT3	beta-1,3-glucuronyltransferase 3 (glucuronosyltransferase I)	1.73
PHYHD1	phytanoyl-CoA dioxygenase domain containing 1	1.73
C21orf59	chromosome 21 open reading frame 59	1.73
CYB5B	cytochrome b5 type B (outer mitochondrial membrane)	1.73
ATP6V1G1	ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G1	1.73
C21orf2	chromosome 21 open reading frame 2	1.73
ARHGAP5	Rho GTPase activating protein 5	1.73
KLF11	Kruppel-like factor 11	1.73
EMC7	ER membrane protein complex subunit 7	1.73
CRYZ	crystallin, zeta (quinone reductase)	1.73
POMP	proteasome maturation protein	1.73
STARD3	StAR-related lipid transfer (START) domain containing 3	1.72
RHBDD3	rhomboid domain containing 3	1.72
ASTE1	asteroid homolog 1 (Drosophila)	1.72
AFF4	AF4/FMR2 family, member 4	1.72
ALKBH5	alkB, alkylation repair homolog 5 (E. coli)	1.72
HERPUD1	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1	1.72
COX17	COX17 cytochrome c oxidase copper chaperone	1.72
OMA1	OMA1 zinc metallopeptidase	1.72
VCX2	variable charge, X-linked 2	1.72
IL17RD	interleukin 17 receptor D	1.72
LOC339803	uncharacterized LOC339803	1.72
CRADD	CASP2 and RIPK1 domain containing adaptor with death domain	1.72
ADAM10	ADAM metallopeptidase domain 10	1.72
BCAS3	breast carcinoma amplified sequence 3	1.72
RASSF8	Ras association (RalGDS/AF-6) domain family (N-terminal) member 8	1.72
SLC12A4	solute carrier family 12 (potassium/chloride transporter), member 4	1.72
GRIN2A	glutamate receptor, ionotropic, N-methyl D-aspartate 2A	1.72
YDJC	YdjC homolog (bacterial)	1.72
RAB18	RAB18, member RAS oncogene family	1.71
RAB12	RAB12, member RAS oncogene family	1.71
MCEE	methylmalonyl CoA epimerase	1.71
NINJ1	ninjurin 1	1.71
AHCYL1	adenosylhomocysteinase-like 1	1.71
RCOR3	REST corepressor 3	1.71
TAOK2	TAO kinase 2	1.71
SPA17	sperm autoantigenic protein 17	1.71
WHAMM	WAS protein homolog associated with actin, golgi membranes and microtubules	1.71
SPRTN	SprT-like N-terminal domain	1.71
CCDC106	coiled-coil domain containing 106	1.71
CHURC1	churchill domain containing 1	1.71
TMBIM4	transmembrane BAX inhibitor motif containing 4	1.71
NPHP3	nephronophthisis 3 (adolescent)	1.71
ABHD4	abhydrolase domain containing 4	1.71
IFT27	intraflagellar transport 27 homolog (Chlamydomonas)	1.71
MIEN1	migration and invasion enhancer 1	1.71
CPT2	carnitine palmitoyltransferase 2	1.70
CCDC104	coiled-coil domain containing 104	1.70
NIT1	nitrilase 1	1.70
TRAM1	translocation associated membrane protein 1	1.70
BCAP31	B-cell receptor-associated protein 31	1.70
RNF216	ring finger protein 216	1.70
ATP5S	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit s (factor B)	1.70
NDUFA7	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 7, 14.5kDa	1.70
COQ7	coenzyme Q7 homolog, ubiquinone (yeast)	1.70
WDR35	WD repeat domain 35	1.70
SMPD1	sphingomyelin phosphodiesterase 1, acid lysosomal	1.70
RBL2	retinoblastoma-like 2	1.70
ADIPOR1	adiponectin receptor 1	1.70
SYT7	synaptotagmin VII	1.70
ATP5S	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit s (factor B)	1.70
IGSF8	immunoglobulin superfamily, member 8	1.70
ITFG3	integrin alpha FG-GAP repeat containing 3	1.70
TMEM128	transmembrane protein 128	1.70
SEC11C	SEC11 homolog C (S. cerevisiae)	1.70
CSRNP1	cysteine-serine-rich nuclear protein 1	1.70
LOC286071	uncharacterized LOC286071	1.70
CTDSP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase 1	1.69
SMIM19	small integral membrane protein 19	1.69

TRMT1L	tRNA methyltransferase 1 homolog (S. cerevisiae)-like	1.69
TRPT1	tRNA phosphotransferase 1	1.69
NAT14	N-acetyltransferase 14 (GCN5-related, putative)	1.69
JMJD8	jumonji domain containing 8	1.69
CDKN2A	cyclin-dependent kinase inhibitor 2A	1.69
CLUAP1	clusterin associated protein 1	1.69
KPNA5	karyopherin alpha 5 (importin alpha 6)	1.69
DNAJC30	DnaJ (Hsp40) homolog, subfamily C, member 30	1.69
MFSD1	major facilitator superfamily domain containing 1	1.69
C14orf159	chromosome 14 open reading frame 159	1.69
ATG4D	autophagy related 4D, cysteine peptidase	1.69
CTSB	cathepsin B	1.69
MAPK3	mitogen-activated protein kinase 3	1.69
PPAPDC2	phosphatidic acid phosphatase type 2 domain containing 2	1.69
TMEM53	transmembrane protein 53	1.69
PTPRU	protein tyrosine phosphatase, receptor type, U	1.69
VPS13A	vacuolar protein sorting 13 homolog A (S. cerevisiae)	1.69
DAK	dihydroxyacetone kinase 2 homolog (S. cerevisiae)	1.69
ALKBH7	alkB, alkylation repair homolog 7 (E. coli)	1.69
CLPX	caseinolytic mitochondrial matrix peptidase chaperone subunit	1.69
REEP3	receptor accessory protein 3	1.69
CCDC53	coiled-coil domain containing 53	1.69
ARRDC3	arrestin domain containing 3	1.68
WDR45B	WD repeat domain 45B	1.68
HSD17B1	hydroxysteroid (17-beta) dehydrogenase 1	1.68
FBXO33	F-box protein 33	1.68
CCDC6	coiled-coil domain containing 6	1.68
ILF3-AS1	ILF3 antisense RNA 1 (head to head)	1.68
ZDHHC5	zinc finger, DHHC-type containing 5	1.68
PTTG1IP	pituitary tumor-transforming 1 interacting protein	1.68
CPNE3	copine III	1.68
MCF2L	MCF.2 cell line derived transforming sequence-like	1.68
CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1	1.68
NECAB3	N-terminal EF-hand calcium binding protein 3	1.68
SAMD10	sterile alpha motif domain containing 10	1.68
FUZ	fuzzy planar cell polarity protein	1.68
TMEM52	transmembrane protein 52	1.68
PVRL3	poliovirus receptor-related 3	1.68
FBXW7	F-box and WD repeat domain containing 7, E3 ubiquitin protein ligase	1.68
GSTK1	glutathione S-transferase kappa 1	1.67
GLIPR2	GLI pathogenesis-related 2	1.67
PDHB	pyruvate dehydrogenase (lipoamide) beta	1.67
CEP19	centrosomal protein 19kDa	1.67
MOSPD1	motile sperm domain containing 1	1.67
NID1	nidogen 1	1.67
COQ4	coenzyme Q4	1.67
LOC286272	uncharacterized LOC286272	1.67
CASC10	cancer susceptibility candidate 10	1.67
C8orf44	chromosome 8 open reading frame 44	1.67
ZNHIT2	zinc finger, HIT-type containing 2	1.67
NSUN5	NOP2/Sun domain family, member 5	1.67
NT5DC1	5'-nucleotidase domain containing 1	1.67
DHRS12	dehydrogenase/reductase (SDR family) member 12	1.67
NHLRC3	NHL repeat containing 3	1.67
ATPIF1	ATPase inhibitory factor 1	1.67
COPS7A	COP9 signalosome subunit 7A	1.67
TM2D2	TM2 domain containing 2	1.67
VPS37A	vacuolar protein sorting 37 homolog A (S. cerevisiae)	1.67
JTB	jumping translocation breakpoint	1.67
THAP7-AS1	THAP7 antisense RNA 1	1.67
SIRT4	sirtuin 4	1.67
ULK1	unc-51 like autophagy activating kinase 1	1.67
PRR5	proline rich 5 (renal)	1.66
ATP6V1A	ATPase, H+ transporting, lysosomal 70kDa, V1 subunit A	1.66
AMZ2	archaelysin family metallopeptidase 2	1.66
RRNAD1	ribosomal RNA adenine dimethylase domain containing 1	1.66
PDXK	pyridoxal (pyridoxine, vitamin B6) kinase	1.66
RAB12	RAB12, member RAS oncogene family	1.66
LZTS2	leucine zipper, putative tumor suppressor 2	1.66
WDTC1	WD and tetratricopeptide repeats 1	1.66

ZNF277	zinc finger protein 277	1.66
HSD17B7	hydroxysteroid (17-beta) dehydrogenase 7	1.66
ARMC10	armadillo repeat containing 10	1.66
CD164	CD164 molecule, sialomucin	1.66
HDHD2	haloacid dehalogenase-like hydrolase domain containing 2	1.66
ABCA1	ATP-binding cassette, sub-family A (ABC1), member 1	1.66
AIFM1	apoptosis-inducing factor, mitochondrion-associated, 1	1.66
HPS3	Hermansky-Pudlak syndrome 3	1.66
IFT43	intraflagellar transport 43 homolog (Chlamydomonas)	1.66
DCAF12	DDB1 and CUL4 associated factor 12	1.66
ATP13A1	ATPase type 13A1	1.66
PHLPP1	PH domain and leucine rich repeat protein phosphatase 1	1.66
TYW5	tRNA-yW synthesizing protein 5	1.66
CC2D1B	coiled-coil and C2 domain containing 1B	1.66
TRUB1	TruB pseudouridine (psi) synthase family member 1	1.65
RFNG	RFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase	1.65
PP7080	uncharacterized LOC25845	1.65
SEC22C	SEC22 vesicle trafficking protein homolog C (S. cerevisiae)	1.65
MYL12B	myosin, light chain 12B, regulatory	1.65
COG7	component of oligomeric golgi complex 7	1.65
RAB3IP	RAB3A interacting protein	1.65
PDXDC1	pyridoxal-dependent decarboxylase domain containing 1	1.65
TMED5	transmembrane emp24 protein transport domain containing 5	1.65
SNX27	sorting nexin family member 27	1.65
GALNT7	polypeptide N-acetylgalactosaminyltransferase 7	1.65
PNPLA8	patatin-like phospholipase domain containing 8	1.65
HPS6	Hermansky-Pudlak syndrome 6	1.65
P4HA2	prolyl 4-hydroxylase, alpha polypeptide II	1.65
PLEKHA3	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 3	1.65
BIRC6	baculoviral IAP repeat containing 6	1.65
RBBP6	retinoblastoma binding protein 6	1.65
BBS12	Bardet-Biedl syndrome 12	1.65
MAPK6	mitogen-activated protein kinase 6	1.65
ZBTB4	zinc finger and BTB domain containing 4	1.65
HMHA1	histocompatibility (minor) HA-1	1.65
VPS13A	vacuolar protein sorting 13 homolog A (S. cerevisiae)	1.65
SIRT3	sirtuin 3	1.65
SLC35C2	solute carrier family 35 (GDP-fucose transporter), member C2	1.65
G6PC3	glucose 6 phosphatase, catalytic, 3	1.65
C12orf5	chromosome 12 open reading frame 5	1.65
VPS37D	vacuolar protein sorting 37 homolog D (S. cerevisiae)	1.64
BRMS1L	breast cancer metastasis-suppressor 1-like	1.64
RIOK3	RIO kinase 3	1.64
UBXN8	UBX domain protein 8	1.64
USF2	upstream transcription factor 2, c-fos interacting	1.64
ANO2	anoctamin 2, calcium activated chloride channel	1.64
PTK7	protein tyrosine kinase 7	1.64
MFSD3	major facilitator superfamily domain containing 3	1.64
FAM132A	family with sequence similarity 132, member A	1.64
ABCD4	ATP-binding cassette, sub-family D (ALD), member 4	1.64
SASH1	SAM and SH3 domain containing 1	1.64
GALNT18	polypeptide N-acetylgalactosaminyltransferase 18	1.64
FAM3A	family with sequence similarity 3, member A	1.64
C2orf76	chromosome 2 open reading frame 76	1.64
E2F5	E2F transcription factor 5, p130-binding	1.64
CAMSAP3	calmodulin regulated spectrin-associated protein family, member 3	1.64
SCRN3	secernin 3	1.64
RABGGTA	Rab geranylgeranyltransferase, alpha subunit	1.64
WDR81	WD repeat domain 81	1.64
LEPREL2	leprecan-like 2	1.64
DEDD2	death effector domain containing 2	1.64
APRT	adenine phosphoribosyltransferase	1.63
PARS2	prolyl-tRNA synthetase 2, mitochondrial (putative)	1.63
CAPZA2	capping protein (actin filament) muscle Z-line, alpha 2	1.63
DENND4C	DENN/MADD domain containing 4C	1.63
LOC101929243	uncharacterized LOC101929243	1.63
KIAA2018	KIAA2018	1.63
DDRGK1	DDRGK domain containing 1	1.63

UHRF1BP1	UHRF1 binding protein 1	1.63
PIGX	phosphatidylinositol glycan anchor biosynthesis, class X	1.63
PYGL	phosphorylase, glycogen, liver	1.63
RNPC3	RNA-binding region (RNP1, RRM) containing 3	1.63
USP37	ubiquitin specific peptidase 37	1.63
APH1B	APH1B gamma secretase subunit	1.63
PLAA	phospholipase A2-activating protein	1.63
UGCG	UDP-glucose ceramide glucosyltransferase	1.63
SLC50A1	solute carrier family 50 (sugar efflux transporter), member 1	1.63
POC5	POC5 centriolar protein	1.63
SEC22C	SEC22 vesicle trafficking protein homolog C (S. cerevisiae)	1.63
C5orf30	chromosome 5 open reading frame 30	1.63
WDR73	WD repeat domain 73	1.63
HM13	histocompatibility (minor) 13	1.63
HOXA-AS2	HOXA cluster antisense RNA 2	1.63
NDUFAF6	NADH dehydrogenase (ubiquinone) complex I, assembly factor 6	1.63
STARD10	StAR-related lipid transfer (START) domain containing 10	1.63
MOSPD2	motile sperm domain containing 2	1.63
PLAA	phospholipase A2-activating protein	1.63
UHMK1	U2AF homology motif (UHM) kinase 1	1.63
CBWD5	COBW domain containing 5	1.63
ARMC10	armadillo repeat containing 10	1.63
RNF181	ring finger protein 181	1.63
SLU7	SLU7 splicing factor homolog (S. cerevisiae)	1.63
SLC38A6	solute carrier family 38, member 6	1.62
DUSP28	dual specificity phosphatase 28	1.62
METTL23	methyltransferase like 23	1.62
YAF2	YY1 associated factor 2	1.62
HSP90B3P	heat shock protein 90kDa beta (Grp94), member 3, pseudogene	1.62
ARL14EP	ADP-ribosylation factor-like 14 effector protein	1.62
SMPD2	sphingomyelin phosphodiesterase 2, neutral membrane (neutral sphingomyelinase)	1.62
ZNF12	zinc finger protein 12	1.62
MRPL57	mitochondrial ribosomal protein L57	1.62
ADD3-AS1	ADD3 antisense RNA 1	1.62
GET4	golgi to ER traffic protein 4 homolog (S. cerevisiae)	1.62
ALKBH5	alkB, alkylation repair homolog 5 (E. coli)	1.62
PYROXD1	pyridine nucleotide-disulphide oxidoreductase domain 1	1.62
RPP25L	ribonuclease P/MRP 25kDa subunit-like	1.62
APOBEC3F	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3F	1.62
ZBTB44	zinc finger and BTB domain containing 44	1.62
FKRP	fukutin related protein	1.62
ADAM10	ADAM metallopeptidase domain 10	1.62
ASXL2	additional sex combs like 2 (Drosophila)	1.62
BCL2L11	BCL2-like 11 (apoptosis facilitator)	1.62
CSRNP1	cysteine-serine-rich nuclear protein 1	1.62
BAG2	BCL2-associated athanogene 2	1.62
HMGCL	3-hydroxymethyl-3-methylglutaryl-CoA lyase	1.61
TP73-AS1	TP73 antisense RNA 1	1.61
WDR78	WD repeat domain 78	1.61
ARMC10	armadillo repeat containing 10	1.61
MAGT1	magnesium transporter 1	1.61
MCF2L	MCF.2 cell line derived transforming sequence-like	1.61
SLC26A6	solute carrier family 26 (anion exchanger), member 6	1.61
FBXL15	F-box and leucine-rich repeat protein 15	1.61
NME5	NME/NM23 family member 5	1.61
NDUFC1	NADH dehydrogenase (ubiquinone) 1, subcomplex unknown, 1, 6kDa	1.61
UQCRFS1	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	1.61
NSMCE1	non-SMC element 1 homolog (S. cerevisiae)	1.61
MARCH6	membrane-associated ring finger (C3HC4) 6, E3 ubiquitin protein ligase	1.61
MLYCD	malonyl-CoA decarboxylase	1.61
OXSM	3-oxoacyl-ACP synthase, mitochondrial	1.61
HIBADH	3-hydroxyisobutyrate dehydrogenase	1.61
FOPNL	FGFR1OP N-terminal like	1.60
SLC45A4	solute carrier family 45, member 4	1.60
ACADVL	acyl-CoA dehydrogenase, very long chain	1.60
SPRTN	SprT-like N-terminal domain	1.60
RAB5B	RAB5B, member RAS oncogene family	1.60
PCBP2	poly(rC) binding protein 2	1.60
HPCAL1	hippocalcin-like 1	1.60
SCYL1	SCY1-like 1 (S. cerevisiae)	1.60

RUFY2	RUN and FYVE domain containing 2	1.60
NT5C2	5'-nucleotidase, cytosolic II	1.60
EIF2D	eukaryotic translation initiation factor 2D	1.60
DNAJA2	DnaJ (Hsp40) homolog, subfamily A, member 2	1.60
HELQ	helicase, POLQ-like	1.60
DCXR	dicarbonyl/L-xylulose reductase	1.60
PSME1	proteasome (prosome, macropain) activator subunit 1 (PA28 alpha)	1.60
SRGAP3	SLIT-ROBO Rho GTPase activating protein 3	1.60
NUBPL	nucleotide binding protein-like	1.60
IFT88	intraflagellar transport 88 homolog (Chlamydomonas)	1.60
ORMDL1	ORMDL sphingolipid biosynthesis regulator 1	1.60
DKFZP564C 152	DKFZP564C152 protein	1.60
TEN1	TEN1 CST complex subunit	1.60
TMEM14A	transmembrane protein 14A	1.60
UBXN8	UBX domain protein 8	1.60
ESRRA	estrogen-related receptor alpha	1.60
IMPA1	inositol(myo)-1(or 4)-monophosphatase 1	1.60
PGK1	phosphoglycerate kinase 1	1.60
PHF10	PHD finger protein 10	1.60
RABGGTB	Rab geranylgeranyltransferase, beta subunit	1.60
FBXW4	F-box and WD repeat domain containing 4	1.60
XBP1	X-box binding protein 1	1.60
OSCP1	organic solute carrier partner 1	1.60
SLC9A4	solute carrier family 9, subfamily A (NHE4, cation proton antiporter 4), member 4	1.60
ANKRD39	ankyrin repeat domain 39	1.60
COA5	cytochrome c oxidase assembly factor 5	1.59
RAB18	RAB18, member RAS oncogene family	1.59
A2M-AS1	A2M antisense RNA 1	1.59
SMIM17	small integral membrane protein 17	1.59
DERL1	derlin 1	1.59
FICD	FIC domain containing	1.59
LINC00930	long intergenic non-protein coding RNA 930	1.59
NUAK2	NUAK family, SNF1-like kinase, 2	1.59
IGSF8	immunoglobulin superfamily, member 8	1.59
ALG14	ALG14, UDP-N-acetylglucosaminyltransferase subunit	1.59
LOH12CR1	loss of heterozygosity, 12, chromosomal region 1	1.59
MRPL54	mitochondrial ribosomal protein L54	1.59
HM13	histocompatibility (minor) 13	1.59
MTMR10	myotubularin related protein 10	1.59
PSMG3-AS1	PSMG3 antisense RNA 1 (head to head)	1.59
SNHG11	small nucleolar RNA host gene 11 (non-protein coding)	1.59
NPEPPS	aminopeptidase puromycin sensitive	1.59
CACFD1	calcium channel flower domain containing 1	1.59
TRIQK	triple QxxK/R motif containing	1.59
BEX2	brain expressed X-linked 2	1.59
ALG2	ALG2, alpha-1,3/1,6-mannosyltransferase	1.59
TMEM25	transmembrane protein 25	1.59
ERMP1	endoplasmic reticulum metallopeptidase 1	1.58
FKBP2	FK506 binding protein 2, 13kDa	1.58
CAPZA2	capping protein (actin filament) muscle Z-line, alpha 2	1.58
CUL9	cullin 9	1.58
TFG	TRK-fused gene	1.58
RBFA	ribosome binding factor A (putative)	1.58
DCUN1D3	DCN1, defective in cullin neddylation 1, domain containing 3	1.58
AIG1	androgen-induced 1	1.58
FAM203A	family with sequence similarity 203, member A	1.58
GNPDA2	glucosamine-6-phosphate deaminase 2	1.58
LINC00339	long intergenic non-protein coding RNA 339	1.58
FOXP1	forkhead box P1	1.58
AIMP2	aminoacyl tRNA synthetase complex-interacting multifunctional protein 2	1.58
MAGT1	magnesium transporter 1	1.58
ATP6V1E1	ATPase, H+ transporting, lysosomal 31kDa, V1 subunit E1	1.58
TRMT2A	tRNA methyltransferase 2 homolog A (S. cerevisiae)	1.58
FLJ37453	uncharacterized LOC729614	1.58
ABCC10	ATP-binding cassette, sub-family C (CFTR/MRP), member 10	1.58
TCEA3	transcription elongation factor A (SII), 3	1.57
NCKAP1	NCK-associated protein 1	1.57
COASY	CoA synthase	1.57

PTTG1IP	pituitary tumor-transforming 1 interacting protein	1.57
FAM179B	family with sequence similarity 179, member B	1.57
FBXL4	F-box and leucine-rich repeat protein 4	1.57
EFCAB7	EF-hand calcium binding domain 7	1.57
NACC1	nucleus accumbens associated 1, BEN and BTB (POZ) domain containing	1.57
PIGB	phosphatidylinositol glycan anchor biosynthesis, class B	1.57
CLPTM1L	CLPTM1-like	1.57
RPP38	ribonuclease P/MRP 38kDa subunit	1.57
TMEM260	transmembrane protein 260	1.57
GCLC	glutamate-cysteine ligase, catalytic subunit	1.57
OSCP1	organic solute carrier partner 1	1.57
CAAP1	caspase activity and apoptosis inhibitor 1	1.57
SPRYD4	SPRY domain containing 4	1.57
FAM3C	family with sequence similarity 3, member C	1.57
XPO5	exportin 5	1.57
ZNF148	zinc finger protein 148	1.57
HSD17B8	hydroxysteroid (17-beta) dehydrogenase 8	1.57
BRE	brain and reproductive organ-expressed (TNFRSF1A modulator)	1.56
RBM41	RNA binding motif protein 41	1.56
KLF9	Kruppel-like factor 9	1.56
FDX1	ferredoxin 1	1.56
ESRRA	estrogen-related receptor alpha	1.56
PTPRF	protein tyrosine phosphatase, receptor type, F	1.56
WDR26	WD repeat domain 26	1.56
WDR73	WD repeat domain 73	1.56
AGA	aspartylglucosaminidase	1.56
ZFAND3	zinc finger, AN1-type domain 3	1.56
PLEKHB2	pleckstrin homology domain containing, family B (evectins) member 2	1.56
COMMD7	COMM domain containing 7	1.56
HINT3	histidine triad nucleotide binding protein 3	1.56
MRPS28	mitochondrial ribosomal protein S28	1.56
RSG1	REM2 and RAB-like small GTPase 1	1.56
SCAP	SREBF chaperone	1.56
ERMARD	ER membrane-associated RNA degradation	1.56
ERC2	ELKS/RAB6-interacting/CAST family member 2	1.56
GPR180	G protein-coupled receptor 180	1.56
ZNF667-AS1	ZNF667 antisense RNA 1 (head to head)	1.56
UFL1	UFM1-specific ligase 1	1.56
FAM160A2	family with sequence similarity 160, member A2	1.56
AMMECR1	Alport syndrome, mental retardation, midface hypoplasia and elliptocytosis chromosomal region gene 1	1.56
ZNF177	zinc finger protein 177	1.56
ZADH2	zinc binding alcohol dehydrogenase domain containing 2	1.56
ARL2BP	ADP-ribosylation factor-like 2 binding protein	1.56
MYEF2	myelin expression factor 2	1.56
ARHGAP5	Rho GTPase activating protein 5	1.56
TMEM8A	transmembrane protein 8A	1.56
NUDT22	nudix (nucleoside diphosphate linked moiety X)-type motif 22	1.55
RIPK1	receptor (TNFRSF)-interacting serine-threonine kinase 1	1.55
PDIA3	protein disulfide isomerase family A, member 3	1.55
ABCB10	ATP-binding cassette, sub-family B (MDR/TAP), member 10	1.55
UBE2M	ubiquitin-conjugating enzyme E2M	1.55
DEAF1	DEAF1 transcription factor	1.55
RABGGTB	Rab geranylgeranyltransferase, beta subunit	1.55
IMPAD1	inositol monophosphatase domain containing 1	1.55
LACTB2	lactamase, beta 2	1.55
FIS1	fission 1 (mitochondrial outer membrane) homolog (S. cerevisiae)	1.55
TRIM41	tripartite motif containing 41	1.55
DTNBP1	dystrobrevin binding protein 1	1.55
USP6	ubiquitin specific peptidase 6	1.55
DEAF1	DEAF1 transcription factor	1.55
ALDH16A1	aldehyde dehydrogenase 16 family, member A1	1.55
TRNT1	tRNA nucleotidyl transferase, CCA-adding, 1	1.55
NPEPPS	aminopeptidase puromycin sensitive	1.55
ABHD17C	abhydrolase domain containing 17C	1.55
NLRP2	NLR family, pyrin domain containing 2	1.55
INPPL1	inositol polyphosphate phosphatase-like 1	1.54
PLEKHB2	pleckstrin homology domain containing, family B (evectins) member 2	1.54
KRT8	keratin 8	1.54

SELO	selenoprotein O	1.54
CYP51A1	cytochrome P450, family 51, subfamily A, polypeptide 1	1.54
SCAF11	SR-related CTD-associated factor 11	1.54
GOLM1	golgi membrane protein 1	1.54
AFG3L2	AFG3-like AAA ATPase 2	1.54
C7orf13	chromosome 7 open reading frame 13	1.54
AP4E1	adaptor-related protein complex 4, epsilon 1 subunit	1.54
IPPK	inositol 1,3,4,5,6-pentakisphosphate 2-kinase	1.54
TSNAX	translin-associated factor X	1.54
ACAD10	acyl-CoA dehydrogenase family, member 10	1.54
MAGT1	magnesium transporter 1	1.54
POC5	POC5 centriolar protein	1.54
NSMCE1	non-SMC element 1 homolog (S. cerevisiae)	1.54
TMEM134	transmembrane protein 134	1.54
TFPT	TCF3 (E2A) fusion partner (in childhood Leukemia)	1.54
MLF2	myeloid leukemia factor 2	1.54
ZNF582-AS1	ZNF582 antisense RNA 1 (head to head)	1.54
ZDHHC4	zinc finger, DHHC-type containing 4	1.54
ZNF264	zinc finger protein 264	1.54
FAM73A	family with sequence similarity 73, member A	1.54
ATP7B	ATPase, Cu++ transporting, beta polypeptide	1.54
PHTF1	putative homeodomain transcription factor 1	1.54
MKNK2	MAP kinase interacting serine/threonine kinase 2	1.54
GOLM1	golgi membrane protein 1	1.54
SLC39A14	solute carrier family 39 (zinc transporter), member 14	1.54
SIRT3	sirtuin 3	1.54
FOXRED2	FAD-dependent oxidoreductase domain containing 2	1.54
ZCWPW1	zinc finger, CW type with PWWP domain 1	1.54
POR	P450 (cytochrome) oxidoreductase	1.54
LINC00938	long intergenic non-protein coding RNA 938	1.53
SNX27	sorting nexin family member 27	1.53
FAM173A	family with sequence similarity 173, member A	1.53
HHLA3	HERV-H LTR-associating 3	1.53
IRS2	insulin receptor substrate 2	1.53
NPRL2	nitrogen permease regulator-like 2 (S. cerevisiae)	1.53
MAT2B	methionine adenosyltransferase II, beta	1.53
DCAF4	DDB1 and CUL4 associated factor 4	1.53
LINC01347	long intergenic non-protein coding RNA 1347	1.53
LOC441455	makorin ring finger protein 1 pseudogene	1.53
ZNF688	zinc finger protein 688	1.53
UBE2Z	ubiquitin-conjugating enzyme E2Z	1.53
TREX1	three prime repair exonuclease 1	1.53
AASDH	aminoadipate-semialdehyde dehydrogenase	1.53
BCAP29	B-cell receptor-associated protein 29	1.53
GPAA1	glycosylphosphatidylinositol anchor attachment 1	1.53
PHOSPHO2	phosphatase, orphan 2	1.53
SURF1	surfeit 1	1.53
TCOF1	Treacher Collins-Franceschetti syndrome 1	1.53
CLPB	ClpB caseinolytic peptidase B homolog (E. coli)	1.53
TTC7A	tetratricopeptide repeat domain 7A	1.53
PLA2G12A	phospholipase A2, group XIIA	1.53
TGFB1	transforming growth factor, beta 1	1.52
LARP4	La ribonucleoprotein domain family, member 4	1.52
RNASEK	ribonuclease, RNase K	1.52
MIIP	migration and invasion inhibitory protein	1.52
POLI	polymerase (DNA directed) iota	1.52
DDRGK1	DDRGK domain containing 1	1.52
AK3	adenylate kinase 3	1.52
KIAA1430	KIAA1430	1.52
TMEM104	transmembrane protein 104	1.52
RUNDC1	RUN domain containing 1	1.52
MPI	mannose phosphate isomerase	1.52
DNAJC21	DnaJ (Hsp40) homolog, subfamily C, member 21	1.52
ALG12	ALG12, alpha-1,6-mannosyltransferase	1.52
ZADH2	zinc binding alcohol dehydrogenase domain containing 2	1.52
FAM134A	family with sequence similarity 134, member A	1.52
GALT	galactose-1-phosphate uridylyltransferase	1.52
LEMD2	LEM domain containing 2	1.52
GADD45B	growth arrest and DNA-damage-inducible, beta	1.52

DNAJB14	DnaJ (Hsp40) homolog, subfamily B, member 14	1.52
FAM45A	family with sequence similarity 45, member A	1.51
FAM45A	family with sequence similarity 45, member A	1.51
MED25	mediator complex subunit 25	1.51
CD164	CD164 molecule, sialomucin	1.51
KIAA0141	KIAA0141	1.51
TIMM13	translocase of inner mitochondrial membrane 13 homolog (yeast)	1.51
CLUAP1	clusterin associated protein 1	1.51
DENND4C	DENN/MADD domain containing 4C	1.51
IPO13	importin 13	1.51
C11orf30	chromosome 11 open reading frame 30	1.51
KCTD21	potassium channel tetramerization domain containing 21	1.51
EXOC7	exocyst complex component 7	1.51
FBXO25	F-box protein 25	1.51
MSRB2	methionine sulfoxide reductase B2	1.51
C1orf43	chromosome 1 open reading frame 43	1.51
PARP10	poly (ADP-ribose) polymerase family, member 10	1.51
A1BG-AS1	A1BG antisense RNA 1	1.51
SDHD	succinate dehydrogenase complex, subunit D, integral membrane protein	1.51
TRIM4	tripartite motif containing 4	1.51
TTC19	tetratricopeptide repeat domain 19	1.51
RNF149	ring finger protein 149	1.51
ADCK5	aarF domain containing kinase 5	1.51
UBE2MP1	ubiquitin-conjugating enzyme E2M pseudogene 1	1.51
NUFIP2	nuclear fragile X mental retardation protein interacting protein 2	1.51
PSENEN	presenilin enhancer gamma secretase subunit	1.51
NAMPT	nicotinamide phosphoribosyltransferase	1.51
COA5	cytochrome c oxidase assembly factor 5	1.50
MTX2	metaxin 2	1.50
RTCA	RNA 3'-terminal phosphate cyclase	1.50
UQCR10	ubiquinol-cytochrome c reductase, complex III subunit X	1.50
ING4	inhibitor of growth family, member 4	1.50
BRAT1	BRCA1-associated ATM activator 1	1.50
REPIN1	replication initiator 1	1.50
TANK	TRAF family member-associated NFKB activator	1.50
AKTIP	AKT interacting protein	1.50
TMEM181	transmembrane protein 181	1.50
LOC100288069	uncharacterized LOC100288069	1.50
IRF2BPL	interferon regulatory factor 2 binding protein-like	1.50
APOA1BP	apolipoprotein A-I binding protein	1.50

Supplementary Table 5

Primer sequences used for qPCR analysis

Gene name	Forward primer	Reverse Primer
Actin	TGGCACCCAGCACAATGAA	CTAAGTCATAGTCCGCCTAGAAGCA
WT1	AGGGTACGAGAGCGATAACCACAC	CTCAGATGCCGACCGTACAAGA
NPHS1	CAACTGGGAGAGACTGGGAGAA	AATCTGACAAGACGGAGCA
NPHS2	GGAGGCTGAAGCGCAAAGAC	GCCATCCTCAGGGACTCAGAAG
SYNPO	AGCCCAAGGTGACCCCGAAT	CCCTGTCACGAGGTGCTGGC
PODXL	GGCAACGGCATTGAGAACA	AGGGTGTTTCCTGTGAGGTTCAG