

Table S1 *Gene abbreviations used in Figure 1*

Adamts17: ADAM metalloproteinase with thrombospondin type 1 motif, 17
Ankrd32: ankyrin repeat domain 32
Apoa1bp: apolipoprotein A-I binding protein
Armc6: armadillo repeat containing 6
Asb7: ankyrin repeat and SOCS box containing 7
Ccnh: cyclin H
Cct3: chaperonin containing TCP1, subunit 3 (gamma)
Cetn3: centrin, EF-hand protein, 3; Tmem161b: transmembrane protein 161B
Chsy1: chondroitin sulfate synthase 1
Cox7c: cytochrome c oxidase subunit VIIc
Edil3: EGF-like repeats and discoidin I-like domains 3
Fam169b: family with sequence similarity 169, member B
Fam172a: family with sequence similarity 172, member A
Gata2a: Gata-binding protein 2a
Gpatch4: G patch domain containing 4
Gpr98: G protein-coupled receptor 98
Hapln4: hyaluronan and proteoglycan link protein 4
Igf1r: insulin-like growth factor 1 receptor
Iqgap3: IQ motif containing GTPase activating protein 3
Lass3: ceramide synthase 3
Lins: lines homolog
Lmna: lamin A/C
Lrrc28: leucine rich repeat containing 28
Lrrk1: leucine-rich repeat kinase 1
Lysmd3: LysM, putative peptidoglycan-binding, domain containing 3
Lysmd4: LysM, putative peptidoglycan-binding, domain containing 4
Mau2: MAU2 chromatid cohesion factor homolog
Mblac2: metallo-beta-lactamase domain containing 2
Mctp1: multiple C2 domains, transmembrane 1
Mef2bnb: MEF2B neighbor
Ncan: neurocan; Nr2c2ap: nuclear receptor 2C2-associated protein
Pcsk6: proprotein convertase subtilisin/kexin type 6

Pgpep 11: pyroglutamyl-peptidase I-like

Pmf1: polyamine-modulated factor 1

Polr3G: polymerase (RNA) III (DNA directed) polypeptide G

Rab25: RAB25, member RAS oncogene family

Rasa1: RAS p21 protein activator (GTPase activating protein) 1

Rfxank: regulatory factor X-associated ankyrin-containing protein

Rhbg: Rh family, B glycoprotein (gene/pseudogene)

Sema4a: sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4A

Slc25a42: solute carrier family 25, member 42

Smg5: smg-5 homolog, nonsense mediated mRNA decay factor (*C. elegans*)

Supp1: SURP and G patch domain containing 1

Synm: synemin, intermediate filament protein

Tm6sf2: transmembrane 6 superfamily member 2

Tmem161a: transmembrane protein 161A

Ttc23: tetratricopeptide repeat domain 23

Ttc24: tetratricopeptide repeat domain 24

Ubqln4: ubiquilin 4