

Group 9 main functional clusters

· Cytoplasmic translation

Tsen2, Stambp, Psmc4, Rpl23a, Psmd7, Psmc1, Psmc5, Rps12, Nhp2, Efl1, Rpp38, Mrto4, Pa2g4, Psma3, Psmd11, Rack1, Rpl19, Eif3g, Eif3b, Psma7, Psmd1, Eif4a1, Drg1, Psma5, Psmd4, Psmd2, Lsg1, Gtpbp4, Nob1, Fcf1, Ftsj3, Ltv1, Ngdn, Ddx18, Bud23, Prmt1, Eif4b, Eif3h, Exosc1, Rpl10a, Rpl13a, Rpl22, Rpl17, Rpl37, Rpl18a, Rpl21, Rpl27a, Rpl23, Rpl34, Rpl14, Fbl, Rpl32, Rpl4, Lyar, Mak16, Nsa2, Pes1, Rps11, Exosc9, Zc3h15, Fam207a, Sbds, Mettl27, Ptma, Sec61b, Eif3j2, Ubb, Habp4, Btf3, Ppia, Eif3a, Rrp7a, Utp11, Rpl36a, Rplp1, Rplp2, Rpl29, Mrpl33, Rpl10, Rps9, Rps27, Rps25, Rps23, Rps14, Rps24, Rps19, Rpl5, Rps6, Rps26, Rps4x, Rps28, Rpl12, Rps27a, Rps18, Rps8, Fau, Rps16, Rps29, Rpl28, Rps5, Pop4, Psmd8, Tsr2, Hif3a, Axin1, Ccdc92, Psmd10, Psmb1, Vwa7, Serf2, Llph, Larp1, Rnf181, Ube2e2, Mindy1, Uchl1, Esd, Ccdc86, Pop7, Cnksr1, Ccdc149

• Mixed, incl. preribosome, and ribosome biogenesis

Kri1, Mybbp1a, Aatf, Wdr46, Dcaf13, Utp14a, Gpatch4, Nop14, Pinx1, Abt1, Mphosph10, Utp3, Znhit6, Gar1, Ddx50, Rbm34, Nop58, Resf1, Rnf17

• Precatalytic spliceosome, and U4/U6 x U5 tri-snRNP complex

Prpf31, Cwc27, Ddx23, Cwc22, Rbmx2, Sf3a3, Htatsf1, Snrnp35, Thumpd1, Rbm17, Slc25a14, Upf3a

· Chemokine receptors bind chemokines

Tmsb4x, Cxcl2, Spp1, Serpinb6a, Timp1, Serpine1, Edn1, Timp3, Ccl17, Mif, Prq4, Pf4

Glutathione metabolism

Nqo1, Cyb5r3, Osgin1, Gss, Ephx1, Gm3776, Gsta1, Gsr, Srxn1, Gclm, Txndc12

Aryl hydrocarbon receptor signalling

Hsp90ab1, Fkbp1a, Ppp3ca, Dnajb6, Tmem59l, H1f2, Fkbpl, Aip

· Mitophagy - animal

Becn1, Bcl2l1, Atg3, Bnip3, Uvrag, Dnajc14, Bcl2l2, Gabarapl1

Amino acids regulate mTORC1

Atp6v1f, Castor1, Rragc, Atp6v0e2, Atp6v0d2, Atp6v0e, Atp6v0d1

• Vesicle fusion with vacuole

Chmp1a, Zfyve19, Hgs, Chmp4b, Chmp5, Chmp3

• S-100/ICaBP type calcium binding domain

\$100a6, Csrp1, Fxyd5, Ahnak, Crip1, \$100a13

Group 10 main functional clusters

· Tight junction assembly

Cdh1, Krt17, Crb3, Wwc1, Foxa1, Foxa2, Tjp3, Cldn2, Ephb2, Krt7, Cldn4, Cd24a, Krt19, Cldn3, Krt8, Krt18, Cldn1

Phase I - Functionalization of compounds

Aldh1a1, Cyp2f2, Fmo3, Cbr2, Cyp4f15, Cyp2a5, Aox3, Mgst2, Cyp2s1, Cyp2e1, Fmo1, Aldh3b2, Chac1

CoA-ligase activity

Acsl5, Slc25a1, Acat2, Aacs, Pcx, Acss2, Acox2, Acaa1b, Acss3, Thrsp

Axonemal dynein complex, and inner dynein arm assembly

Ccdc103, Ppil6, Ccdc39, Rsph9, Rsph1, Drc1, Drc3, Dnajb13, Ropn1l

• Tektin, and establishment of left/right asymmetry

Efhc1, Cfap52, Fhad1, Ccdc180, Dlec1, Ribc1, Lrrc23, Tekt4, Cfap45

Inner dynein arm

Pih1d2, Dnah2, Dnah6, Cfap43, Dnah10, Dnah12, Cfap58

• Myosin II complex, and mesenchyme migration

Cnn1, Mylk, Tagln, Lmod1, Myh11, Spire2, Tnnt3

· Adrenaline, noradrenaline inhibits insulin secretion

Vpreb3, Gng3, Gnai1, Adra2a, Hcar1, Htr1b

 Wnt, and frizzled/secreted frizzled-related protein Wnt2, Sfrp4, Wnt10b, Wnt16, Gpc3, Tbx4

• Mixed, incl. surface film, and alveolar lamellar body

Scgb1a1, Sftpb, Scgb3a2, Ager, Sec14l3, Gprc5a