

Supplementary Table 4. GO analysis of mRNAs WM-related CEN

Term	Count	Pvalue	Gene
GO:0005902~microvillus	7	5.10E-04	ATP6V1A, IFT20, VCAM1, CNP, USH1C, ATP6V1B2, PDGFA
GO:0070062~extracellular exosome	73	7.01E-04	HSP90AB1, HEXB, GBE1, ARPC1B, ITGB2, DYSF, SLC2A3, GHITM, PRSS23, AQP1, PSMD8, HEBP2, CPNE2, C19ORF18, GYG1, PRKACB, EDIL3, CTSC, RAB8B, MAP2K1, TPI1, ANXA2, PLLP, APLP2, ANXA5, RRAS2, TEX14, PTGR1, UCHL3, NME1, PROCR, MYH3, TUBB2A, TST, ATP6V1B2, SMS, BLVRB, HPRT1, ALDOA, ARL8B, DNASE1L1, ATP6V1A, IGSF8, CNP, HTRA1, XPC, LRP2, CORO1A, HSPA13, GNAI1, SDCBP, LDHA, MAN2A1, MAN1C1, PGK1, PACSIN3, CD59, BPTF, MPST, CYP2J2, TRMT10A, VCAM1, CADM1, HSPA2, CDC42BPA, PTPRD, IFT20, TF, FABP3, TP53I3, CXCL12, CD22, UBE2M
GO:0008092~cytoskeletal protein binding	6	0.001713596	FABP3, ANXA2, PACSIN3, LDB3, ALDOA, CORO1A
GO:0030335~positive regulation of cell migration	10	0.007315187	SUN2, SDCBP, CEMIP, SEMA4D, SPHK1, SEMA4C, RRAS2, PDGFA, CORO1A, BCAR1
GO:0043086~negative regulation of catalytic activity	6	0.012517416	PPP1R14A, ANXA2, ANXA5, PHACTR3, TXNIP, OAZ1
GO:0004536~deoxyribonuclease activity	3	0.013387921	DFFB, NME1, DNASE1L1
GO:0005737~cytoplasm	112	0.015363395	TES, LPGAT1, GIMAP2, MUM1, CPOX, RBPJ, BZW1, PTPDC1, AQP1, RPS6KA3, PREX1, SESN1, POGZ, SOX8, CPNE2, RGS9, PIAS4, UNC5CL, MAP2K1, AGTPBP1, RBP7, FRMD6, BIN1, HECW2, PSME3, TBPL1, TXNIP, HPRT1, PRR11, ARL8B, PXX, CEMIP, ZBED8, CNP, ARHGAP18, XPC, OAZ1, CORO1A, SDCBP, LDHA, NUA1, EMG1, PACSIN3, IP6K3, BPTF, FANCL, KLHL24, BTBD10, LRP2BP, MLLT11, TSGA10, NASP, NACAD, FGF13, MYD88, UBE2M, SNAP25, HSP90AB1, TGFB1I1, CDCA7L,

			AKAP12, HEBP2, LBH, RFK, ENC1, CLIC2, BOK, DFFB, ZHX2, DYNLT3, SPHK1, ANXA5, TFEB, SLC39A11, TEX14, NSUN6, NAV1, PTGR1, UCHL3, NME1, ARL4C, GAP43, TUBB2A, PSRC1, SAPCD2, IL1RAPL1, ATG4C, BLVRB, USP40, USH1C, TOB2, CXXC5, TOB1, ARNTL2, GNAI1, CLMN, NRIP2, CHN1, LRRC8B, MAP4K5, CCDC184, RFTN2, PPP1R14A, GCH1, PLCL1, FBXL16, CDC42BPA, P2RX7, ZYX, NCAPD2, KIAA1958, BCAR1
GO:0048146~positive regulation of fibroblast proliferation	5	0.017480309	ANXA2, MYC, SPHK1, PDGFA, AQP1
GO:0030424~axon	10	0.018197632	GRM3, KIRREL3, GAP43, HOMER1, BIN1, IL1RAPL1, KLHL24, FGF13, LDLRAP1, CORO1A
GO:0006096~glycolytic process	4	0.024449498	LDHA, TPI1, PGK1, ALDOA
GO:0030833~regulation of actin filament polymerization	3	0.026705051	PREX1, ARHGAP18, CORO1A
GO:0009611~response to wounding	5	0.028977114	GAP43, PLLP, MYC, PDGFA, BPTF
GO:0060326~cell chemotaxis	5	0.032017746	CXCL12, VCAM1, C3AR1, CXCL14, BCAR1
GO:0042802~identical protein binding	22	0.032099848	MPST, SUN2, ZHX2, UHRF1, APLP2, DYNLT3, MSANTD3, CDC42BPA, POU3F2, ADIPOR2, NME1, SDCBP, LDHA, BIN1, PSME3, CNTN2, AMOTL2, HPRT1, ALDOA, BCAT1, MYD88, CTSC
GO:0042470~melanosome	6	0.034243687	SDCBP, MREG, HSP90AB1, CNP, ANXA2, ATP6V1B2
GO:0004572~mannosyl-oligosaccharide 1,3-1,6-alpha-mannosidase activity	2	0.035926247	MAN2A2, MAN2A1
GO:0009440~cyanate catabolic process	2	0.036582608	MPST, TST
GO:0009749~response to glucose	5	0.036916882	LDHA, ACVR1C, TXNIP, SIDT2, NKX2-2
GO:0035556~intracellular signal	14	0.037199119	SHC4, SPHK1, PLCL1, CDC42BPA, PREX1, SDCBP, RPS6KA3, NUA1, STK17A, CHN1,

transduction			MAP4K5, SCG2, RGS9, SGK2
GO:0005634~nucleus	112	0.041779378	TES, GABPB2, MUM1, ADARB2, RBPJ, PTPDC1, AQP1, PSMD8, RPS6KA3, MYC, SESN1, POGZ, PIP4K2A, SOX8, CPNE2, RGS9, ZNF565, DDX17, PIAS4, MAP2K1, AGTPBP1, APLP2, ZNF281, ZFP2, MTUS1, POU3F2, HECW2, PSME3, TXNIP, ZNF678, PRR11, PPK, CEMIP, CNP, XPC, BAZ2B, RNPC3, OAZ1, CORO1A, ZBTB3, SDCBP, LDHA, NUA1, EMG1, ZNF665, RALGDS, IP6K3, ZNF266, BPTF, CDK19, TFAP2E, EAF1, HSPA2, FOXN2, CLK4, BTBD10, MLLT11, NASP, ZNF536, NACAD, FGF13, MYD88, ZNF652, NOP10, HSP90AB1, CDCA7L, SNX10, PRSS23, PIK3C2B, LBH, ENC1, ZNF404, CLIC2, ZNF488, BOK, DFFB, ZHX2, TPI1, ANXA2, DYNLT3, SPHK1, TFEB, SLC39A11, TET1, UCHL3, NME1, ARL4C, TUBB2A, SAPCD2, LUC7L3, RBMS1, USP40, ALDOA, SGK2, SLC25A6, DNASE1L1, UHRF1, TOB2, TOB1, ARNTL2, GNAI1, DNAJB2, NRIP2, ZNF189, TRMT10A, GCH1, ZNF182, STK17A, ZYX, NCAPD2, ZNF697, ZNF211
GO:0004674~protein serine/threonine kinase activity	13	0.042230075	CDK18, MAP2K1, CDK19, NEK5, CDC42BPA, CLK4, RPS6KA3, NUA1, ACVR1C, STK17A, MAP4K5, SGK2, PRKACB
GO:0045177~apical part of cell	5	0.04458957	VCAM1, HOMER1, FZD6, USH1C, AQP1
GO:0006468~protein phosphorylation	15	0.044625021	CDK18, PPK, CDK19, NEK5, TEX14, CDC42BPA, P2RX7, RPS6KA3, NUA1, ACVR1C, STK17A, MAP4K5, SGK2, PRKACB, IP6K3
GO:0048260~positive regulation of receptor-mediated endocytosis	3	0.047250245	TF, ANXA2, LDLRAP1
GO:0005768~endosome	9	0.048244172	ANXA2, DYSF, M6PR, PACSIN3, MAL, LRP2, OCIAD2, ABCG1, TJAP1