

Table S1. List of the enriched pathways in the *mdx* vs. WT analysis. Created based on the proteomics data (protein ID changed for gene ID for the purpose of analysis) using the Search Tool for the Retrieval of Interacting Genes/Proteins (STRING) database (and the incorporated Reactome and KEGG databases). FDR < 0.05

#term ID	term description	changed genes	all genes in the pathway	strengh	FDR	Changed genes
M MU - 168 256	Immune System	154	1621	0.35	7.06e-18	Itgb2,Tubb6,Col1a1,Tubb5,Plaur,Calr,Cstb,Cd44,Vav1,Ctsb,Arpc2,Srp14,Galns,Cybb,Ctss,Ncf1,Ctsz,Myh9,Serpnb6a,Vtn,Cyba,Timp2,Atp6v1e1,Psme3,Apaf1,Hsp90b1,Tbk1,Lgmn,Npc2,Ddx41,Lpcat1,Hexb,Plau,Ripk3,Atp6v1c1,Igf2r,Tapbp,Csflr,P4hb,Pa2g4,Gusb,Casp1,Casp8,Anapc2,Pdia3,Fabp5,Ptpn1,Ptx3,S100a11,Vcam1,Tlr2,Bcl10,Fgr,Anapc4,Slc15a4,Ctsc,Copb1,Pak1,Asah1,Man2b1,Cotl1,Ifi30,Csk,Ltf,Nckap11,Rap2b,C1qb,Eef1a1,Grn,Dok3,Vat1,C1qa,Cul7,Itrp2,Cnpy3,Ckap4,Epx,Hk3,Lamp2,Stbd1,Glb1,Pstpip1,Tubb2a,Plekho2,Iqgap2,Itgam,Itgb5,H2Eb1,Hp,Tubb2b,Prep,Glmm,Impdh1,Tax1bp1,Plcg2,Wasf2,Klc1,Arpc1b,Card11,Col3a1,Fyb,Dock2,Casp3,Cdc27,Sec31a,Ncf4,Cd74,Ceacam1,Hmha1,Mrc2,Sirpa,Arpc3,Nos1,Cd63,Stat2,Psap,Cap1,Camk2d,Clta,Trim25,Gmfg,Ap1s1,Camp,Mlec,Eif4e2,Pja1,Atp6v1a,Tmem173,S100a9,Pld3,Syk,Lgals3,Arpc4,Dsp,Myo5a,Fbxo30,Ppia,Abi1,Ctsd,Cdc23,Stxbp2,Panx1,Iqgap1,Ptpn6,Myo9b,Ripk1,C5ar1,Keap1,Psmb9,Pja2,Actr3,Ptprc,Bin2,Ncf2
M MU - 392 499	Metabolism of proteins	147	1609	0.33	1.33e-15	Galnt1,Rpl13,Tubb6,Pabpc1,Plaur,Rps11,Calr,Rpl8,Dnmt1,Ctr9,Rcn1,Rps9,Rplp1,Rps18,Srp14,Ctsz,Tnip1,Cog1,Psme3,Hdac2,Rab32,Hsp90b1,Gfpt2,Matn3,Lman2,Arf4,Rpl24,P4hb,Rps26,Bet11,Hgs,Pdia3,Pcna,Chgb,Bcl10,Alpl,Rpl6,Rpl28,Ctsc,Copb1,Rnf40,Nucb1,Rps4x,Ces1d,Arcn1,Rpl4,Copb2,Sec23ip,Npl,Spon1,Rpl21,Rab8b,Eef1a1,Spon2,Rpl2211,Rps271,Rpl37,Us28,Cul7,Ckap4,Pdia6,Rps23,Fn1,Tmed2,Glb1,Tmed3,Rpl37a,Tubb2a,Rab33b,Arfgap3,Rab13,Rpl7,Comm7,Hist1h2af,Rpl26,Rps12,Rps7,Npm1,Tubb2b,Rfwd2,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Man2a1,Rpl34,Lgals1,Cd109,Sec31a,Ccdc8,Golm1,Rpl23a,Rpl11,Hdac1,Rps8,Stam2,Rps6,Rpl7a,Stam,Igf2,Tnc,Dpm3,Rps16,Rps19,Top1,Vcan,Trp53bp1,Hnrnpc,Spp1,Obsl1,Copg1,Gfpt1,Rpl9,Rps28,Fstl1,Rpl35a,Prkcs,Renbp,Rpl13a,Eef1b2,Fbxo30,Rps15a,Rps20,Dda1,Ctsd,Mcf2,Rpl27a,Galnt4,Rps24,Mdga1,Ripk1,Dag1,Keap1,Nup50,Rpl14,Wac,Apoe,Psmb9,Specs3,Rpl31,Nop58

M MU - 895 385 4	Metabolism of RNA	121	556	0. 7 4 1 1	Rpl13,Pabpc1,Sf3a1,Rps11,Rpl8,Rps9,Wtap,Khsrp,Rplp1,Prpf31,Rps18,Prpf3,Rrp7a,Pelp1,P sme3,Ddx39,Snrpf,Ftsj3,Mnat1,Smn1,Ppwd1,Pabpn1,Phf5a,Rpl24,Rbm22,Rps26,Wdr75,Ncl, Cstf3,Ctnnbl1,Exosc9,Ncbp1,Ebna1bp2,Sf3a3,Srsf9,Rpl6,Ddx47,Rpl28,Mphosph10,Cstf2,Rp s4x,Mphosph6,Rpl4,Tsr1,Cnot3,Wdr18,Rpl21,Ddx21,Rpl221,Thoc2,Rps271,Rpl37,Cpsf2,Ut p15,Wdr43,Rpp38,Rps23,Rpl37a,Uspp39,Utp18,Rpl7,Pdcd11,Rpl26,Rps12,Rps7,Prpf38a,Rpl 17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Gtf2f2,Rpl34,Isy1,Utp3,Nhp211, Puf60,Rpl23a,Rpl11,Rps8,Rps6,Set,Rpl7a,Sf3b5,Cnot2,Fus,Rngtt,Rps16,Rps19,Cnot8,Polr2c ,Papola,Pes1,Srsf5,Hnrnp1,Rpl9,Rps28,Rpl35a,Pqbp1,Rpl13a,Snrpa1,Srsf6,Rps15a,Rps20,Sf 1,Rpl27a,Srrm1,Bud31,Rps24,Hnrnpf,Nup50,Rpl14,Tex10,Psmb9,Rpl31,Nop58
M MU - 168 249	Innate Immune System	114	949	0. 4 5 1 9	Itgb2,Tubb5,Plaur,Cstb,Cd44,Vav1,Ctsb,Arpc2,Srp14,Galns,Cybb,Ctss,Ncf1,Ctsz,Myh9,Serp inb6a,Vtn,Cyba,Timp2,Atp6v1c1,Psme3,Apaf1,Hsp90b1,Tbk1,Lgmn,Npc2,Ddx41,Lpcat1,He xb,Plau,Ripk3,Atp6v1c1,Igf2r,Pa2g4,Gusb,Casp1,Casp8,Fabp5,Ptx3,S100a11,Tlr2,Bcl10,Fgr ,Slc15a4,Ctsc,Copb1,Pak1,Asah1,Man2b1,Cotl1,Ltf,Nckap11,Rap2b,C1qb,Eef1a1,Grn,Dok3, Vat1,C1qa,Cnpy3,Ckap4,Epx,Hk3,Lamp2,Stbd1,Glb1,Pstpip1,Plekho2,Iqgap2,Itgam,Hp,Prpc ,Impdh1,Tax1bp1,Plcg2,Wasf2,Arpc1b,Card11,Dock2,Ncf4,Ceacam1,Hmha1,Sirpa,Arpc3,N os1,Cd63,Psap,Cap1,Gmfg,Camp,Mlec,Atp6v1a,Tmem173,S100a9,Pld3,Syk,Lgals3,Arpc4,D sp,Myo5a,Ppia,Abi1,Ctsd,Panx1,Iqgap1,Ptpn6,Myo9b,Ripk1,C5ar1,Psmb9,Actr3,Ptprc,Bin2, Ncf2
M MU - 597 592	Post-translational protein modification	90	1254	0. 2 3 0 5	Galnt1,Tubb6,Plaur,Calr,Dnmt1,Ctr9,Rcn1,Ctsz,Tnpi1,Cog1,Psme3,Hdac2,Rab32,Hsp90b1, Gfpt2,Matn3,Lman2,Arf4,P4hb,Bet11,Hgs,Pdia3,Pcna,Chgb,Bcl10,Alpl,Ctsc,Copb1,Rnf40,N ucb1,Arcn1,Copb2,Sec23ip,Npl,Spon1,Rab8b,Eef1a1,Spon2,Uspp28,Cul7,Ckap4,Pdia6,Fn1,T med2,Glb1,Tmed3,Tubb2a,Rab33b,Arfgap3,Rab13,Commd7,Hist1h2af,Npm1,Tubb2b,Rfwd 2,Man2a1,Lgals1,Cd109,Sec31a,Ccdc8,Golm1,Hdac1,Stam2,Stam,Tnc,Dpm3,Top1,Vcan,Trp 53bp1,Hnrnp1,Spp1,Obsl1,Copg1,Gfpt1,Fstl1,Prkcs,Hnrnp1,Fbxo30,Dda1,Mcf2,Galnt4,Md ga1,Ripk1,Dag1,Keap1,Nup50,Wac,Apoe,Psmb9,Nop58
M MU - 679 122 6	Major pathway of rRNA processing in the nucleolus and cytosol	73	171	1. 5 0 4 0	Rpl13,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rrp7a,Pelp1,Ftsj3,Rpl24,Rps26,Wdr75,Ncl,Exosc9,Eb na1bp2,Rpl6,Ddx47,Rpl28,Mphosph10,Rps4x,Mphosph6,Rpl4,Tsr1,Wdr18,Rpl21,Ddx21,Rpl 2211,Rps271,Rpl37,Utp15,Wdr43,Rpp38,Rps23,Rpl37a,Utp18,Rpl7,Pdcd11,Rpl26,Rps12,Rps 7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Utp3,Nhp211,Rpl23 a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Pes1,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl2 7a,Rps24,Rpl14,Tex10,Rpl31,Nop58
M MU - 679	Neutrophil degranulation	73	519	0. 5 0 2	Itgb2,Tubb5,Plaur,Cstb,Cd44,Ctsb,Srp14,Galns,Cybb,Ctss,Ctsz,Serp1b6a,Cyba,Timp2,Apaf 1,Npc2,Lpcat1,Hexb,Plau,Igf2r,Pa2g4,Gusb,Fabp5,Ptx3,S100a11,Tlr2,Fgr,Slc15a4,Ctsc,Copb 1,Asah1,Man2b1,Cotl1,Ltf,Nckap11,Rap2b,Eef1a1,Grn,Dok3,Vat1,Ckap4,Epx,Hk3,Lamp2,St bd1,Glb1,Plekho2,Iqgap2,Itgam,Hp,Prpc,Impdh1,Dock2,Ceacam1,Hmha1,Sirpa,Cd63,Psap,C

869 5				1 5	ap1,Gmfg,Camp,Mlec,Tmem173,S100a9,Lgals3,Dsp,Ppia,Ctsd,Iqgap1,Ptpn6,C5ar1,Ptprc,Bin2
M MU - 109 582	Hemostasis	59	524	0. 4 3	7. 9 5 e- 0 9 Itgb2,Tubb6,Coll1a1,Plaur,Cd44,Vav1,Itih3,Apbb1ip,Serpinb6a,Sparc,Hdac2,Habp4,Plau,Itga5,Pcyox11,Dock8,Grb14,Ptpn1,Pdpn,Fgr,P2rx4,Csk,Atp1b3,Islr,Itpr2,Lamp2,Fn1,Tubb2a,Lhfp12,Itgam,Pla2g4a,Tubb2b,Prp,Dock10,Plcg2,Klc1,Dock2,Cd109,Cd74,Ceacam1,Sirpa,Nos1,Hdac1,Akap10,Plek,Cd63,Psap,Igf2,Tagln2,Kdm1a,Cbx5,Syk,Ppia,Cd84,Stxbp2,Ptpn6,Slc3a2,Glg1,Jmjd1c
M MU - 727 66	Translation	54	223	0. 7 6 e- 2 0	4. 4 6 Rpl13,Pabpc1,Rps11,Rpl8,Rps9,Rplp1,Rps18,Srp14,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Eef1a1,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Eef1b2,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 565 365 6	Vesicle-mediated transport	54	594	0. 3 3 e- 0 5	2. 4 4 Galnt1,Tubb6,Sh3gl1,Calr,Pafah1b3,Arpc2,Ctsz,Sparc,Cog1,Rab32,Hsp90b1,Lman2,Arf4,Igf2r,Ap3s1,Msr1,Bet11,Hgs,Acdb3,Ctsc,Copb1,Arcn1,Copb2,Sec23ip,Rab8b,Stab1,Tmed2,Tmed3,Tubb2a,Rab33b,Arfgap3,Rab3gap2,Rab13,Pla2g4a,Hp,Tubb2b,Klc1,Gcc1,Tpd52,Sec31a,Ctnn,Arpc3,Sort1,Stam2,Stam,Cyth2,CltA,Ap1s1,Fnbp1,Copg1,Arpc4,Mcfd2,Apoe,Actr3
M MU - 975 956	Nonsense Mediated Decay (NMD) independent of the Exon Junction Complex (EJC)	52	90	1. 1 4 e- 3 3	2. 3 7 Rpl13,Pabpc1,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Ncbp1,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 975 957	Nonsense Mediated Decay (NMD) enhanced by the Exon Junction Complex (EJC)	52	110	1. 0 5 e- 3 0	2. 9 3 Rpl13,Pabpc1,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Ncbp1,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31

M MU - 128 021 8	Adaptive Immune System	52	701	0. 0. 2 4 4 0	0. 0. 2 0 4 0 Itgb2,Tubb6,Col1a1,Calr,Vav1,Ctsb,Cybb,Ctss,Ncf1,Cyba,Psme3,Lgmn,Tapbp,Anapc2,Pdia3,Vcam1,Bcl10,Anapc4,Ctsc,Pak1,Ifi30,Csk,Cul7,Itpr2,Tubb2a,Itgb5,H2-Eb1,Tubb2b,Glmm,Plcg2,Klcl,Card11,Col3a1,Fyb,Cdc27,Sec31a,Ncf4,Cd74,Mrc2,CltA,Ap1s1,Pja1,Syk,Fbxo30,Ctsd,Cdc23,Ptpn6,Keap1,Psmb9,Pja2,Ptpcr,Ncf2
M MU - 179 933 9	SRP-dependent cotranslational protein targeting to membrane	51	88	1. 1 4 3 3	8. 2 4 e- 3 3 Rpl13,Rps11,Rpl8,Rps9,Rplp1,Rps18,Srp14,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 156 827	L13a-mediated translational silencing of Ceruloplasmin expression	51	107	1. 0 5 3 0	6. 9 3 e- 3 0 Rpl13,Pabpc1,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 727 37	Cap-dependent Translation Initiation	51	115	1. 0 2 e- 2 9	8. 6 4 e- 2 9 Rpl13,Pabpc1,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 726 89	Formation of a pool of free 40S subunits	50	97	1. 0 9 3 0	2. 2 9 e- 3 0 Rpl13,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31
M MU - 727 06	GTP hydrolysis and joining of the 60S ribosomal subunit	50	108	1. 0 2 4 e-	7. 4 2 e- 4 Rpl13,Rps11,Rpl8,Rps9,Rplp1,Rps18,Rpl24,Rps26,Rpl6,Rpl28,Rps4x,Rpl4,Rpl21,Rpl2211,Rps271,Rpl37,Rps23,Rpl37a,Rpl7,Rpl26,Rps12,Rps7,Rpl17,Rpl15,Rps25,Rpl36,Rpl35,Rpl29,Rpl3,Rpl32,Rpl5,Rplp2,Rpl34,Rpl23a,Rpl11,Rps8,Rps6,Rpl7a,Rps16,Rps19,Rpl9,Rps28,Rpl35a,Rpl13a,Rps15a,Rps20,Rpl27a,Rps24,Rpl14,Rpl31

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M MU - 199 991	Membrane Trafficking	47	560	0. 0. 3 7 1	Galnt1,Tubb6,Sh3gl1,Pafah1b3,Arpc2,Ctsz,Cog1,Rab32,Lman2,Arf4,Igf2r,Ap3s1,Bet11,Hgs,Acbd3,Ctsc,Copb1,Arcn1,Copb2,Sec23ip,Rab8b,Tmed2,Tmed3,Tubb2a,Rab33b,Arfgap3,Rab3gap2,Rab13,Pla2g4a,Tubb2b,Klc1,Gcc1,Tpd52,Sec31a,Ctnn,Arpc3,Sort1,Stam2,Stam,Cyth2,Clta,Ap1s1,Fnbp1,Copg1,Arpc4,Mcf2,Actr3
M MU - 147 424 4	Extracellular matrix organization	45	295	0. 5 6 e- 1 0	2. 5 3 Itgb2,Col1a1,Cd44,Ctsb,Htra1,P4ha1,Ctss,Vtn,Timp2,Sparc,P4ha2,Plod1,Matn3,Itga5,Leprel2,P4hb,Col5a1,Vcam1,Emilin1,Pcolce,Acan,Mmp2,Ppib,Colgalt1,Fbln2,Fn1,Itgam,Itgb5,Sh3pxd2a,Crtap,Col5a2,Capn6,Col3a1,Ceacam1,Matn1,Lepre1,Tnc,Vcan,Col14a1,Spp1,Ctsd,Plod2,Serpinh1,Lox,Dag1
M MU - 194 315	Signaling by Rho GTPases	43	381	0. 5 4 e- 0 6	2. 0 5 Tubb6,Rhoc,Vav1,Arpc2,Cybb,Ncf1,Myh9,Cyba,Ywhah,Evl,Hgs,Arhgef2,Arhgdib,Pak1,Nckap11,Gmip,Fmn11,Arhgap15,Rhoj,Tubb2a,Iqgap2,Rcc2,Tubb2b,Wasf2,Klc1,Arpc1b,Arhgap24,Ncf4,Hmha1,Mad211,Arpc3,Myh10,Gopc,Arap1,Fgd3,Arhgap25,S100a9,Arpc4,Abi1,Iqgap1,Myo9b,Actr3,Ncf2
M MU - 900 693 4	Signaling by Receptor Tyrosine Kinases	39	418	0. 0. 3 0 4 5	0. 0 Col1a1,Sh3gl1,Vav1,Cybb,Ncf1,Cyba,Atp6v1e1,Thbs4,Atp6v1c1,Hgs,Col5a1,Ptpn1,Ncbp1,Ptpn12,Pak1,Csk,Nckap11,Cilp,Fn1,Chd4,Wasf2,Col5a2,Col3a1,Gtf2f2,Tia1,Ncf4,Stam2,Stam,Igf2,Clta,Polr2c,Spp1,Nrp2,Atp6v1a,Abi1,Ptpn6,Hnrnpf,Ncf2,Erb2ip
M MU - 722 03	Processing of Capped Intron-Containing Pre-mRNA	38	234	0. 5 8 e- 0 9	2. 1 5 Sf3a1,Wtap,Prpf31,Prpf3,Ddx39,Snrpf,Ppwd1,Pabpn1,Phf5a,Rbm22,Cstf3,Ctnnbl1,Ncbp1,Sf3a3,Srsf9,Cstf2,Thoc2,Cpsf2,Usp39,Prpf38a,Gtf2f2,Isy1,Nhp211,Puf60,Sf3b5,Fus,Polr2c,Papola,Srsf5,Hnrnpc,Pqbp1,Snrpa1,Srsf6,Sfl,Srrm1,Bud31,Hnrnpf,Nup50
M MU -	Cellular responses to external stimuli	35	397	0. 3 2	0. 0 Tubb6,Ehmt2,Cybb,Ncf1,Cyba,Atp6v1e1,Psme3,Asf1a,Gpx8,Atp6v1c1,P4hb,Cdk2,Anapc2,Gpx7,Dnajc2,Anapc4,Mt2,Eef1a1,Ptges3,Tubb2a,Hist1h1a,Hist1h2af,Tubb2b,Hist1h1b,Cdc27,Ncf4,Rbbp4,Sirt1,Camk2d,Atp6v1a,Cdc23,Cdkn1c,Nup50,Psmb9,Ncf2

895 389 7				2 6	
M MU - 721 63	mRNA Splicing - Major Pathway	34	178	0. 5 6 1 e- 1 0	Sf3a1,Prpf31,Prpf3,Snrpf,Ppwd1,Pabpn1,Phf5a,Rbm22,Cstf3,Ctnnb11,Ncbp1,Sf3a3,Srsf9,Cstf2,Cpsf2,Usp39,Prpf38a,Gtf2f2,Isy1,Nhp211,Puf60,Sf3b5,Fus,Polr2c,Papola,Srsf5,Hnrnpc,Pqbp1,Snrpa1,Srsf6,Sf1,Srrm1,Bud31,Hnrnpf
M MU - 226 275 2	Cellular responses to stress	34	395	0. 0 3 0 1 4 7	Tubb6,Ehmt2,Cybb,Ncf1,Cyba,Atp6v1e1,Psme3,Asf1a,Gpx8,Atp6v1c1,P4hb,Cdk2,Anapc2,Gpx7,Dnajc2,Anapc4,Eef1a1,Ptges3,Tubb2a,Hist1h1a,Hist1h2af,Tubb2b,Hist1h1b,Cdc27,Ncf4,Rbbp4,Sirt1,Camk2d,Atp6v1a,Cdc23,Cdkn1c,Nup50,Psmb9,Ncf2
M MU - 195 258	RHO GTPase Effectors	30	246	4. 7 0. 7 4 6 e- 0 5	Tubb6,Rhoc,Arpc2,Cybb,Ncf1,Myh9,Cyba,Ywhah,Evl,Pak1,Nckap11,Fmn11,Tubb2a,Iqgap2,Rcc2,Tubb2b,Wasf2,Klc1,Arpc1b,Ncf4,Mad211,Arpc3,Myh10,Gopc,S100a9,Arpc4,Abi1,Iqgap1,Actr3,Ncf2
M MU - 446 203	Asparagine N-linked glycosylation	28	263	0. 0 0 4 0 8 2	Tubb6,Calr,Ctsz,Cog1,Gfpt2,Lman2,Arf4,Bet11,Pdia3,Ctsc,Copb1,Arcn1,Copb2,Sec23ip,Npl,Tmed2,Glb1,Tmed3,Tubb2a,Arfgap3,Tubb2b,Man2a1,Sec31a,Dpm3,Copg1,Gfpt1,Renbp,Mcf2
M MU - 760 02	Platelet activation, signaling and aggregation	26	253	0. 0 3 0 9 2 3	Col1a1,Vav1,Itih3,Apbb1ip,Sparc,Habp4,Pcyox11,Ptpn1,Pdpn,Csk,Islr,Itpr2,Lamp2,Fn1,Lhfp12,Pla2g4a,Plcg2,Cd109,Plek,Cd63,Psap,Igf2,Tagln2,Syk,Stxbp2,Ptpn6
M MU -	Axon guidance	25	278	0. 3 0 3	Tubb6,Rhoc,Arpc2,Evl,Itga5,Dpysl3,Col5a1,Vasp,Pak1,Mmp2,Tubb2a,Tubb2b,Enah,Arpc1b,Col5a2,Col3a1,Arpc3,Cltla,Msn,Arpc4,Myo9b,Dag1,Ncam1,Actr3,Ptprc

422 475				5 2	
M MU - 681 144 2	Intra-Golgi and retrograde Golgi-to-ER traffic	22	186	0. 4 5	0. 0 1 4 Galnt1,Tubb6,Pafah1b3,Cog1,Arf4,Igf2r,Bet11,Copb1,Arcn1,Copb2,Tmed2,Tmed3,Tubb2a,Rab33b,Arfgap3,Rab3gap2,Pla2g4a,Tubb2b,Klc1,Gcc1,Cyth2,Copg1
M MU - 147 429 0	Collagen formation	20	96	0. 6 9	2. 2 5 e- 0 6 Col1a1,Ctsb,P4ha1,Ctss,P4ha2,Plod1,Leprel2,P4hb,Col5a1,Pcolce,Ppib,Colgalt1,Crtap,Col5a2,Col3a1,Leprel1,Col14a1,Plod2,Serpinh1,Lox
M MU - 948 021	Transport to the Golgi and subsequent modification	20	177	0. 4 3	0. 0 4 5 Tubb6,Ctsz,Cog1,Lman2,Arf4,Bet11,Ctsc,Copb1,Arcn1,Copb2,Sec23ip,Tmed2,Tmed3,Tubb2a,Arfgap3,Tubb2b,Man2a1,Sec31a,Copg1,Mcfd2
M MU - 726 49	Translation initiation complex formation	19	57	0. 9 e- 0 9	8. 6 4 e- 0 9 Pabpc1,Rps11,Rps9,Rps18,Rps26,Rps4x,Rps27l,Rps23,Rps12,Rps7,Rps25,Rps8,Rps6,Rps16,Rps19,Rps28,Rps15a,Rps20,Rps24
M MU - 199 977	ER to Golgi Anterograde Transport	19	147	0. 4 9	0. 0 1 5 Tubb6,Ctsz,Cog1,Lman2,Arf4,Bet11,Ctsc,Copb1,Arcn1,Copb2,Sec23ip,Tmed2,Tmed3,Tubb2a,Arfgap3,Tubb2b,Sec31a,Copg1,Mcfd2
M MU - 692 42	S Phase	19	147	0. 4 9	0. 0 1 5 Mcm7,Pola1,Psme3,Mnat1,Mcm4,Rfc4,Fen1,Cdk2,Mcm6,Anapc2,Pcna,Anapc4,Mcm3,Mcm2,Cdc27,Cdc23,Mcm5,Cdkn1c,Psmb9

M MU - 726 95	Formation of the ternary complex, and subsequently, the 43S complex	18	50	0. 9 3	9. 1 2 e- 0 9	Rps11,Rps9,Rps18,Rps26,Rps4x,Rps27l,Rps23,Rps12,Rps7,Rps25,Rps8,Rps6,Rps16,Rps19,Rps28,Rps15a,Rps20,Rps24
M MU - 727 02	Ribosomal scanning and start codon recognition	18	57	0. 8 7	4. 8 5 e- 0 8	Rps11,Rps9,Rps18,Rps26,Rps4x,Rps27l,Rps23,Rps12,Rps7,Rps25,Rps8,Rps6,Rps16,Rps19,Rps28,Rps15a,Rps20,Rps24
M MU - 381 426	Regulation of Insulin-like Growth Factor (IGF) transport and uptake by Insulin-like Growth Factor Binding Proteins (IGFBPs)	18	122	0. 5 4	0. 0 0 5 8	Rcn1,Hsp90b1,Matn3,P4hb,Chgb,Nucb1,Ckap4,Pdia6,Fn1,Lgals1,Golm1,Igf2,Tnc,Vcan,Spp1,Fstl1,Prkcsh,Apoe
M MU - 165 081 4	Collagen biosynthesis and modifying enzymes	17	63	0. 8 1	9. 9 6 e- 0 7	Col1a1,P4ha1,P4ha2,Plod1,Leprel2,P4hb,Col5a1,Pcolce,Ppib,Colgalt1,Crtap,Col5a2,Col3a1,Leprel1,Col14a1,Plod2,Serpinh1
M MU - 202 948 0	Fcgamma receptor (FCGR) dependent phagocytosis	17	82	0. 6 9	2. 3 0 e- 0 5	Vav1,Arpc2,Myh9,Fgr,Pak1,Nckap1l,Plcg2,Wasf2,Arpc1b,Arpc3,Pld3,Syk,Arpc4,Myo5a,Abi1,Myo9b,Actr3
M MU - 397 014	Muscle contraction	17	171	0. 3 7	0. 0 3 5 7	Tpm4,Actn3,Myl4,Myh8,Myl6b,Vim,Pak1,Atp1b3,Itpr2,Itgb5,Myh6,Nos1,Camk2d,Myh3,Tnnt2,Dmd,Mybpc2

M MU - 895 727 5	Post-translational protein phosphorylation	17	116	0. 5 4	0. 0 0 0 9 8	Rcn1,Hsp90b1,Matn3,P4hb,Chgb,Nucb1,Ckap4,Pdia6,Fn1,Lgals1,Golm1,Tnc,Vcan,Sppl,Fstl1,Prkcs,Apoe
M MU - 692 39	Synthesis of DNA	17	118	0. 5 3	0. 0 0 1 2	Mcm7,Pola1,Psme3,Mcm4,Rfc4,Fen1,Cdk2,Mcm6,Anapc2,Pcna,Anapc4,Mcm3,Mcm2,Cdc27,Cdc23,Mcm5,Psmb9
M MU - 202 733	Cell surface interactions at the vascular wall	16	114	0. 5 2	0. 0 0 2 3	Itgb2,Col1a1,Cd44,Itga5,Grb14,Atp1b3,Fn1,Itgam,Cd74,Ceacam1,Sirpa,Ppia,Cd84,Ptpn6,Slc3a2,Glg1
M MU - 885 668 8	Golgi-to-ER retrograde transport	16	128	0. 4 7	0. 0 0 6 6	Galnt1,Tubb6,Pafah1b3,Arf4,Copb1,Arcn1,Copb2,Tmed2,Tmed3,Tubb2a,Arfgap3,Rab3gap2,Pla2g4a,Tubb2b,Klcl,Copg1
M MU - 114 608	Platelet degranulation	15	122	0. 4 6	0. 0 1 0 9	Itih3,Sparc,Habp4,Pcyox11,Islr,Lamp2,Fn1,Lhfp12,Cd109,Plek,Cd63,Psap,Igf2,Tagln2,Stxbp2
M MU - 213 229 5	MHC class II antigen presentation	15	138	0. 4 1	0. 0 2 9 4	Tubb6,Ctsb,Ctss,Lgmn,Ctsc,Ifi30,Tubb2a,H2-Eb1,Tubb2b,Klcl,Sec31a,Cd74,Clt,Ap1s1,Ctsd

M MU - 147 422 8	Degradation of the extracellular matrix	15	144	0. 3 9	0. 0 4 0 5	Col1a1,Cd44,Ctsb,Htra1,Ctss,Timp2,Col5a1,Acan,Mmp2,Fn1,Col5a2,Capn6,Col3a1,Spp1,Ctsd
M MU - 300 017 8	ECM proteoglycans	14	50	0. 8 2	1. 1 2 e- 0 5	Col1a1,Vtn,Sparc,Matn3,Col5a1,Acan,Fn1,Itgb5,Col5a2,Col3a1,Matn1,Tnc,Vcan,Dag1
M MU - 202 948 2	Regulation of actin dynamics for phagocytic cup formation	14	61	0. 7 3	7. 6 5 e- 0 5	Vav1,Arpc2,Myh9,Pak1,Nckap1l,Wasf2,Arpc1b,Arpc3,Syk,Arpc4,Myo5a,Abi1,Myo9b,Actr3
M MU - 216 083	Integrin cell surface interactions	14	79	0. 6 2	0. 0 0 0 8 2	Itgb2,Col1a1,Cd44,Vtn,Itga5,Col5a1,Vcam1,Fn1,Itgam,Itgb5,Col5a2,Col3a1,Tnc,Spp1
M MU - 453 279	Mitotic G1 phase and G1/S transition	14	131	0. 4 4 3	0. 0 4 4 3	Mcm7,Pola1,Psme3,Mnat1,Mcm4,Cdk2,Mcm6,Mcm3,Mcm2,Hdac1,Rbbp4,Mcm5,Cdkn1c,Psmb9
M MU - 738 56	RNA Polymerase II Transcription Termination	13	63	0. 6 9	0. 0 0 4 4	Ddx39,Snrpf,Pabpn1,Cstf3,Ncbp1,Srsf9,Cstf2,Thoc2,Cpsf2,Papola,Srsf5,Srsf6,Srrm1

M MU - 690 52	Switching of origins to a post-replicative state	13	90	0. 5 3	0. 0 7 0	Mcm7,Psme3,Mcm4,Cdk2,Mcm6,Anapc2,Anapc4,Mcm3,Mcm2,Cdc27,Cdc23,Mcm5,Psmb9
M MU - 680 787 8	COPI-mediated anterograde transport	13	95	0. 5 1	0. 0 1 6	Tubb6,Cog1,Arf4,Bet1l,Copb1,Arcn1,Copb2,Tmed2,Tmed3,Tubb2a,Arfgap3,Tubb2b,Copg1
M MU - 535 780 1	Programmed Cell Death	13	116	0. 4 2	0. 0 3 3	Ywhah,Apaf1,Ripk3,Casp8,Vim,Mkl1,Hist1h1a,Hmgb2,Bak1,Hist1h1b,Casp3,Dsp,Ripk1
M MU - 983 231	Factors involved in megakaryocyte development and platelet production	13	118	0. 4 2	0. 0 8 3	Tubb6,Hdac2,Dock8,Tubb2a,Tubb2b,Dock10,Klcl,Dock2,Hdac1,Akap10,Kdm1a,Cbx5,Jmjd1c
M MU - 721 87	mRNA 3-end processing	12	54	0. 7 2	0. 0 0 4 8	Ddx39,Pabpn1,Cstf3,Ncbp1,Srsf9,Cstf2,Thoc2,Cpsf2,Papola,Srsf5,Srsf6,Srrm1
M MU - 123 697 5	Antigen processing-Cross presentation	12	92	0. 4 9	0. 0 2 2 7	Calr,Cybb,Ncf1,Cyba,Psme3,Tapbp,Pdia3,Itgb5,Ncf4,Mrc2,Psmb9,Ncf2

M MU - 681 143 4	COPI-dependent Golgi-to-ER retrograde traffic	12	94	0. 0. 4 8	0. 0 2 6 1	Tubb6,Arf4,Copb1,Arcn1,Copb2,Tmed2,Tmed3,Tubb2a,Arfgap3,Tubb2b,Klcl1,Copg1
M MU - 255 958 3	Cellular Senescence	12	124	1. 8	4. 7 9 e- 1 6	Rbbp4,Asf1a,Hist1h2af,Hist1h1a,Hist1h1b,Ehmt2,Cdk2,Anapc2,Anapc4,Cdkn1c,Cdc27,Cdc23
M MU - 054 14	Dilated cardiomyopathy	12	90	2. 2 9 e- 2 4	7. 2 2 9 e- 2 4	Dmd,Sgcb,Sgcd,Sgcg,Dag1,Itga5,Itgb5,Cacng1,Adcy3,Tpm4,Tnnt2,Myh6
M MU - 054 12	Arrhythmogenic right ventricular cardiomyopathy	11	76	2. 3 3 e- 2 2	4. 1 6 e- 2 2	Dsp,Ctnna3,Actn3,Dmd,Sgcb,Sgcd,Sgcg,Dag1,Itga5,Itgb5,Cacng1
M MU - 390 522	Striated Muscle Contraction	10	35	0. 0. 8 3 4 4	0. 0 0 0 4 4	Tpm4,Actn3,Myl4,Myh8,Vim,Myh6,Myh3,Tnnt2,Dmd,Mybpc2
M MU - 122	ROS and RNS production in phagocytes	9	36	0. 7 7	0. 0 0 2 2	Cybb,Ncf1,Cyba,Atp6v1e1,Atp6v1c1,Ncf4,Nos1,Atp6v1a,Ncf2

255 6						
M MU - 689 62	Activation of the pre-replicative complex	8	32	0. 7 7	0. 0 4 7	Mcm7,Pola1,Mcm4,Cdk2,Mcm6,Mcm3,Mcm2,Mcm5
M MU - 329 968 5	Detoxification of Reactive Oxygen Species	8	34	0. 7 5	0. 0 6 6	Cybb,Ncf1,Cyba,Gpx8,P4hb,Gpx7,Ncf4,Ncf2
M MU - 566 321 3	RHO GTPases Activate WASPs and WAVES	8	34	0. 7 5	0. 0 6 6	Arpc2,Nckap1l,Wasf2,Arpc1b,Arpc3,Arpc4,Abi1,Actr3
M MU - 176 187	Activation of ATR in response to replication stress	8	37	0. 7 1	0. 0 0 1	Mcm7,Mcm4,Rfc4,Cdk2,Mcm6,Mcm3,Mcm2,Mcm5
M MU - 750 67	Processing of Capped Intronless Pre-mRNA	7	28	0. 7 7	0. 0 0 6	Snrpf,Pabpn1,Cstf3,Ncbp1,Cstf2,Cpsf2,Papola
M MU - 896 404 3	Plasma lipoprotein clearance	7	30	0. 7 4	0. 0 4 7	Npc2,Apobrl,Lipa,Cltla,Hdlbp,Apoe,Soat1

M MU - 217 378 2	Binding and Uptake of Ligands by Scavenger Receptors	7	35	0. 6 7	0. 0 2 8 9	Calr,Sparc,Hsp90b1,Msrl,Stab1,Hp,Apoe
M MU - 679 131 2	TP53 Regulates Transcription of Cell Cycle Genes	7	35	0. 6 7	0. 0 2 8 9	Cdk2,Pcna,Cnot3,Npm1,Cnot2,Cnot8,Cdkn1c
M MU - 300 017 1	Non-integrin membrane-ECM interactions	7	37	0. 6 5	0. 0 3 6 9	Col1a1,Vtn,Col5a1,Fn1,Itgb5,Col5a2,Col3a1
M MU - 255 958 2	Senescence-Associated Secretory Phenotype (SASP)	7	40	0. 6 2	0. 0 4 9 0	Ehmt2,Cdk2,Anapc2,Anapc4,Cdc27,Cdc23,Cdkn1c
M MU - 123 697 3	Cross-presentation of particulate exogenous antigens (phagosomes)	6	8	1. 0 1	0. 0 0 4 4	Cybb,Ncf1,Cyba,Itgb5,Ncf4,Ncf2
M MU - 775 95	Processing of Intronless Pre- mRNAs	6	19	0. 8 7	0. 0 1 0 1	Pabpn1,Cstf3,Ncbp1,Cstf2,Cpsf2,Papola

M MU - 895 632 1	Nucleotide salvage	6	23	0. 7 9	0. 0 2 0 7	Gmpr2,Ada,Upp1,Hprt,Uck2,Ampd2
M MU - 566 859 9	RHO GTPases Activate NADPH Oxidases	6	24	0. 7 7	0. 0 2 4 3	Cybb,Ncf1,Cyba,Ncf4,S100a9,Ncf2
M MU - 176 408	Regulation of APC/C activators between G1/S and early anaphase	6	29	0. 6 9	0. 0 4 8 3	Cdk2,Anapc2,Anapc4,Cdc27,Mad211,Cdc23
M MU - 300 048 0	Scavenging by Class A Receptors	4	10	0. 9 8	0. 0 3 8 8	Calr,Hsp90b1,Msr1,Apoe
M MU - 042 60	Cardiac muscle contraction	4	84	1. 8 5	1. 7 3 e- 0 5	Myh6,Tnnt2,Tpm4,Cacng1
M MU - 712 88	Creatine metabolism	4	10	0. 9 8	0. 0 3 8 8	Ckmt1,Ckb,Gatm,Gamt

M MU - 156 697 7	Fibronectin matrix formation	3	4	1. 0 1	0. 0 4 0 2	Itga5,Fn1,Ceacam1
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