

Table S12: Enrichr Cellular components down									
Term	Overlap	P-value	Adjusted P-value	Old P-value	Old Adjusted P-value	Odds Ratio	Combined Score	Genes	
Mitochondrial Inner Membrane (GO:0005743)	72/409	1.42E-29	3.31E-27	0	0.622576677	413.5342099	MRPS17,NDUFA11,NDUFA12,AQP8,NDUFA10,MRPL36,MRPL34,COX6A1,COX7C,COX6A2,MRPL4,MRPL42,MPD2,CHCHD1,COA5,MRPS24,NDUFC2,SDHC,MRPL48,COX6B2,HADHB,SMO11,NDUF58,PLCSRs,NDUF57,NDUF56		
Mitochondrial Membrane (GO:0031968)	83/595	1.13E-26	1.31E-24	0	0.476829864	214.4506569	MRPS17,NDUFA11,NDUFA12,AQP8,NDUFA10,MRPL36,MRPL34,COX6A1,COX7C,COX6A2,MRPL4,MRPL42,AFM2,MPC2,ACADM,CHCHD1,TEMEM14B,TEMEM14B,COA5,MRPS24,NDUFC2,SDHC,MRPL48,COX6B2,HADHB,SMO11,NDUF58,PLCSRs,NDUF57,NDUF56		
Mitochondrial Membrane (GO:0005759)	50/407	3.49E-14	2.71E-12	0	0.394354281	122.1982449	ACAA2,ECO1,ETFB,MRPL34,GC5H,ACADL,ALDH2,C1QB,ACADM,HADH,ACADS,MCCO2,GSTK1,GPX1,TST,MTM1,HOGA1,MRPL48,MPSNAP1,SMO11,NDUF58,NDUF57,BOLA3,SUGCL2,SUGCL1,CASQ1,ALDH1A7,IG		
Intracellular Organelle Lumen (GO:0070013)	81/912	5.41E-14	1.31E-12	0	0.2805121736	85.89065057	SERPINA1,ACAA2,ECO1,BLETTB,PCSK9,GC5H,ACADL,ALDH2,AFM2,FTH1,C1QB,ACADM,HADH,GV1,ACADS,MCCO2,GSTK1,GPX1,JGFBP5,TSTD1,AHSG,TNNC1,OMD,TMT1A,AMT2,MAD,APOA1,APOA4,HOGA1,IG		
Brush Border Membrane (GO:0031526)	11/40	1.12E-07	3.87E-06	0	0.1026912071	164.3860260	SLC34A2,ACE2,SLC34A19,SLC22A5,AQP8,SLC34A1,CA4,SLC5A1,CD36,PDK1,SLC28A1		
Cytosolic Small Ribosomal Subunit (GO:0028627)	11/40	1.12E-07	3.87E-06	0	0.1026912071	164.3860260	SLC34A2,ACE2,SLC34A19,SLC22A5,AQP8,SLC34A1,CA4,SLC5A1,CD36,PDK1,SLC28A1		
Small Ribosomal Subunit (GO:0001593)	11/41	1.48E-07	3.87E-06	0	0.9326300985	156.1195855	RP514,RP525,RP517,RP59,RP58,RP53A,RP520,FAU,RP511,RP527A,RP524		
Microbody Lumen (GO:0031073)	12/50	1.54E-07	3.87E-06	0	0.855749963	134.2391235	FABP1,GSTK1,GRHPR,NUDT7,AMACR,DAO,EHADH,JDH1,ECO2,PIPOX,ACAA1,DHRS4		
Peroxisomal Matrix (GO:0005782)	12/50	1.54E-07	3.87E-06	0	0.855749963	134.2391235	FABP1,GSTK1,GRHPR,NUDT7,AMACR,DAO,EHADH,JDH1,ECO2,PIPOX,ACAA1,DHRS4		
CMG Complex (GO:0071162)	6/9	1.66E-07	3.87E-06	0	0.534078218	840.5419784	GINS1,GINS2,GINS3,GINS4,MCM3,MCMS		
Peroxisome (GO:0005777)	18/134	1.6E-06	3.11E-05	0	0.4223599138	56.3651206	GSTK1,ACO1,ABCD3,JDH1,ECO2,MGST1,PIPOX,DHRS4,SOD1,FABP1,GRHPR,NUDT7,AMACR,DAO,EHADH,MVD,ACAA1,SLC27A2		
Cytosolic Large Ribosomal Subunit (GO:0028625)	11/51	1.6E-06	3.11E-05	0	0.7440857947	99.29019903	RPL32,RPL31,IRLPL1,IRLPL1,IRLPL2,RPL11,IRLPL36,IRLPL36A,IRLPL13A,IRLPL35A,IRLPL7		
Large Ribosomal Subunit (GO:0001593)	11/52	1.97E-06	3.53E-05	0	0.7258996261	57.16712441	RPL32,RPL31,IRLPL1,IRLPL1,IRLPL2,RPL11,IRLPL36,IRLPL36A,IRLPL13A,IRLPL35A,IRLPL7		
Endoplasmic Reticulum Membrane (GO:0005789)	54/872	8.82E-25	0.00136721	0	0.1247409471	17.2612005	MOGAT3,MOGAT2,MSMO1,CYP6A1,FTCD,FADS2,SDR16C5,NSDHL,CYP4V2,CYP2P2,IRL1,LRAT,TEMEM14A,PCYT1B,DGAT2,DGAT1,SLC12A2,SLC5A1,CASQ1,HPD,SLC27A2,PON3,SLC3D1,FXRDC,MGST3,TPMPSS		
Chylomicron (GO:0042827)	4/9	1.84E-04	0.00276006	0	0.2147409471	184.7417597	APOC2,APOC1,APOA4,APOB		
Peritubosome, Large Subunit Precursor (GO:0030687)	5/16	1.9E-04	0.00276006	0	0.122140345	104.6889129	NIP7,MTOA4,RRS1,NOC2L,RRP15		
Intracellular Membraneless Organelle (GO:0043232)	72/1730	2.38E-04	0.003244796	0	0.1611417062	13.46497033	POPS,FEN1,PNX1,HMGB2,GPATC4,NOC2L,PWP1,IRP8,IRP7,IRP8,IRP7,GYS2,RP514,FBLS,SDR16C5,NSDHL,RRP17,HINT1,AIFM2,MR2,RL36,BUD23,RP511,RP59,DGAT2,ANXA2,TMOD4,TMT1A,FAAH2,IRLPL31A,ACLS5,CDPF1,RP53		
Small-Subunit Processome (GO:0032040)	12/70	2.51E-04	0.003244796	0	0.602925102	69.0925102	FBLR,RP514,RP517,RP59,RP58,RP53A,SNU13,RP511,RP527A,RP524		
Cytoplasmic Vesicle Lumen (GO:0060205)	13/117	3.11E-04	0.003819187	0	0.3304054444	27.29450501	SERPINA1,GSN,UCAAH,HSQ,JDH1,GSTP1,NME2,APOA1,TF,GNPDA1,BIN2,GY1,S100A11		
Nucleolus (GO:0005730)	48/805	4.76E-04	0.00554486	0	0.1324204617	13.26851268	POPS,FEN1,DDX27,NIP7,IRLPL1,PNX1,HMGB2,GPATC4,SNU13,NOC2L,PWP1,IRP8,IRP7,SELENBP1,RP514,IRLPL36,IRLPL36A,IRLPL13A,IRLPL35A,CD		
Nuclear Lumen (GO:0031981)	47/814	0.0010703	0.01186333	0	0.1680461835	11.4929031	POPS,FEN1,DDX27,NIP7,IRLPL1,PNX1,HMGB2,GPATC4,SNU13,NOC2L,PWP1,IRP8,IRP7,SELENBP1,RP514,IRLPL36,IRLPL36A,IRLPL13A,IRLPL35A,CD		
Secretory Granule Lumen (GO:0034774)	23/316	0.00103407	0.012227907	0	0.13201162	13.26851268	SERPINA1,ACO1,SERPINA1,GSN,ANXA2,UCAAH,AHSG,GSTP1,JDH1,SERPINF2,NME2,APOA1,PLAC8,TF,SCDPD,HTTR,GNPDA1,BIN2,AIFM2,ACAA1,GY1,NIT2,S100A11		
Ribosome (GO:0005840)	7/46	0.001218052	0.012227907	0	0.4826586799	32.40894613	PSMA6,RP525,RP517,IRP8,IRLPL36A,IRLPL13A,RP511		
Lipid Droplet (GO:0005811)	10/88	0.001259527	0.012227907	0	0.345721684	23.08390363	SDR16C5,HSD3B7,NSDHL,DGAT2,SCCPD,HNAK2,AFM2,FAAH2,TMT1A,CIDEB		
Nuclear Chromosome (GO:0000228)	10/90	0.001499399	0.013951499	0	0.337043593	21924.9355	GINS1,GINS2,CDG45,TTFR,GINS3,PNX1,GINS4,MCM3,RRS1,MCMS		
Triglyceride-Rich Plasma Lipoprotein Particle (GO:0034386)	4/15	0.001672193	0.013965719	0	0.9751913396	62.38838518	APOC2,APOC1,APOA4,APOB		
Very-Low-Density Lipoprotein Particle (GO:0034361)	4/15	0.001672193	0.013965719	0	0.9751913396	62.38838518	APOC2,APOC1,APOA4,APOB		
Cell Projection Membrane (GO:0031253)	11/107	0.001678284	0.013965719	0	0.309133263	19.75356466	SLC34A2,ACE2,SLC34A19,SLC22A5,AQP8,SLC34A1,CA4,PDK1,SLC5A1,CD36,SLC28A1		
Low-Density Lipoprotein Particle (GO:0034362)	3/9	0.003343088	0.026859985	0	0.1340914715	76.40262827	APOC2,APOA4,APOB		
Lysosomal Lumen (GO:0043202)	9/86	0.003823089	0.02692066	0	0.3147647584	17.52199875	CD74,TCN2,HEXA,OMD,IF30,APOB,GC,GY1,SPAM1		
Mitochondrial Intermembrane Space (GO:0005758)	8/71	0.003976594	0.02688892	0	0.3417386947	18.8891363	TMEM8B,NDUFA8,GATM,NDUFB7,CMCA,CHCHD10,COX5A,SOD1		
High-Density Lipoprotein Particle (GO:0034364)	4/19	0.004233523	0.030825342	0	0.7154317549	39.09634709	APOC2,PON1,APOC1,APOA4		
Ficolin-1-Rich Granule Lumen (GO:1904813)	11/123	0.004622258	0.03179344	0	0.2647503516	14.0360586	SERPINA1,GSN,GNPDA1,BIN2,FTH1,JDH1,GSTP1,FGL2,NME2,LTAAH,GY1		
Vesicle Membrane (GO:0012506)	8/77	0.006518208	0.04668884	0	0.311923001	15.69957215	BAIAP2L2,ZNRF2,ANXA1,ANXA2,YDANXAA,ANXA5,API3S		
Focal Adhesion (GO:0009925)	24/387	0.003744775	0.042802741	0	0.179169576	879161441	RP59,ANXA1,GSN,RP31,RP58,RP11,TNNC1,IRPL2,ANXA5,NME2,IRLPL3A,RP53A,IRPL7,DP4,RP514,CNN1,RP17,CSRP1,PLAU,FLNB,RP511,PFN1,MAPRE1,TGM2		
Cell-Substrate Junction (GO:0030055)	24/395	0.003987539	0.06075824	0	0.175282154	818031443	RP59,ANXA1,GSN,RP31,RP58,RP11,TNNC1,IRPL2,ANXA5,NME2,IRLPL3A,RP53A,IRPL7,DP4,RP514,CNN1,RP17,CSRP1,PLAU,FLNB,RP511,PFN1,MAPRE1,TGM2		
ATP-binding Cassette (ABC) Transporter Complex (GO:0043190)	2/5	0.012102455	0.076212758	0	0.1748722222	78.7838703	ABCG8,ABCG5		
Vacuolar Lumen (GO:0005840)	12/163	0.015346707	0.04099549	0	0.214088238	8.942153827	PLAC8,CD74,TTTR,TCN2,ANXA2,OMD,HEXA,IF30,APOB,GC,GY1,SPAM1		
Specific Granule Membrane (GO:0035579)	9/90	0.016020676	0.095713267	0	0.262394186	10.8429142	CEACAM1,PGRCM1,DGAT1,PLAU,MOSPD2,CD36,SLC2A5,SLC27A2		
ATPase Dependent Transmembrane Transport Complex (GO:0008533)	2/6	0.01721986	0.101521901	0	0.1334722222	53.97992105	ABCG8,ABCG5		
Microvillus (GO:0005902)	6/58	0.017864369	0.101521901	0	0.308932535	12.4705386	VIL1,MYO7B,USH1C,ANKS4B,CALML4,ENPP7		
Myofibril (GO:0030016)	4/29	0.019525262	0.08181718	0	0.4293082117	16.88706326	PSMA6,DES,TFN2,CDNA2,MYL2		
Vesicle (GO:0031982)	15/230	0.002195792	0.109433011	0	0.1881155225	7.340796317	SLC34A2,CBR1,ANXA1,ANXA2,AQP8,SLC34A1,ANXA4,GSTP1,ANXA5,APOA1,APOA4,BAIAP2L2,TF,RP527A		
Collagen-Containing Extracellular Matrix (GO:0060203)	22/283	0.022294605	0.118606069	0	0.1649690329	6.263872496	APCS,SERPINA1,SERPINA1,ANXA1,ANXA2,ANXA5,AIDPOQ,FGL2,DPTAPOA1,APGA,MFAP5,VFN1,GH1,AIFM2,ANGPTL3,TGM2,C9A4		
Spherical High-Density Lipoprotein Particle (GO:0034366)	2/7	0.042222548	0.051179872	0	0.1707222222	39.83591338	APOC2,PON1		
Smooth Endoplasmic Reticulum (GO:0005790)	3/19	0.02950077	0.146440626	0	0.5023122392	17.69816287	AQPR,CASQ1,FTCD		
Specific Granule (GO:0042591)	11/159	0.029579889	0.146440626	0	0.1999752917	7.040452617	CEACAM1,PGRCM1,ACO1,DGAT1,PLAU,AIFM2,MOSPD2,CD36,SLC2A5,SLC27A2,NIT2		
Endoplasmic Reticulum Lumen (GO:0005788)	17/289	0.033845878	0.164293522	0	0.1684929078	5.70505604	SERPINA1,SERPINA1,JGFBP5,AHSG,TNNC1,EBN3,MTTP,APOA1,DBI,APOA4,TF,ESD,MELTF,CASQ1,APOB,SLC27A2,CES2		
Mitochondrial Outer Membrane (GO:0005781)	3/21	0.004833474	0.182812438	0	0.4464534075	14.5526281	MRPL18,MRPL48,MRPL34		
Nuclear Exosome (RNase Complex) (GO:0101019)	2/9	0.03958785	0.184479383	0	0.7847222222	24.6946248	EXOSC5,EXOSC2		
Tertiary Granule Lumen (GO:1904724)	5/54	0.047447511	0.204433705	0	0.273606017	50.051851341	FTH1,JDH1,TMT1A,LTAAH,NIT2		
Secretory Granule Membrane (GO:0030687)	16/279	0.046849772	0.209623017	0	0.163853529	5.015244515	SLC30A8,DGAT1,MGST1,MOSPD2,NDUFC2,SLC2A5,CUZD1,CYBSR1,CEACAM1,PGRCM1,PLAU,ANPEP,CA4,TEKT3,CD36,SLC27A2		
RNA Polymerase I Complex (GO:0005736)	2/11	0.05678541	0.248872221	0	0.5947222222	16.8665238	POLR2E,POLR1E		
Intracellular Vesicle (GO:0097708)	2/11	0.05678541	0.248872221	0	0.5947222222	16.8665238	AQPR,SLC5A1		
Endosome Lumen (GO:0031304)	3/25	0.09779935	0.253249542	0	0.3650241977	10.28811346	GH1,AP4S1,APOB		
Cornified Envelope (GO:0001333)	4/42	0.0339907	0.266248143	0	0.283070777	7.75413392	SCEL,CNFN,EVLPL,PPL		
Serine-Type Endopeptidase Complex (GO:1905373)	2/12	0.067599204	0.271562559	0	0.5352222222	14.41973333	PLAU,MBL2		
Serine-Type Peptidase Complex (GO:1905299)	2/12	0.067599204	0.271562559	0	0.5352222222	14.41973333	PLAU,MBL2		
Ficolin-1-Rich Granule (GO:0101002)	11/184	0.07467127	0.27865454	0	0.1708535564	4.532076025	SERPINA1,GSN,GNPDA1,BIN2,FTH1,JDH1,GSTP1,FGL2,NME2,LTAAH,GY1		
Endopeptidase Complex (GO:1905369)	2/14	0.089827043	0.345333551	0	0.4459722222	10.78225567	PLAU,MBL2		
Actin-Based Cell Projection (GO:0098858)	6/88	0.08530041	0.376352451	0	0.1961711405	45.46057834	VIL1,MYO7B,USH1C,ANKS4B,CALML4,ENPP7		
NADPH Oxidase Complex (GO:0043202)	2/15	0.00237454	0.376698818	0	0.4116452991	9.468720209	DUOX1,DUOX2		
Platelet Alpha Granule (GO:0031091)	6/90	0.06893998	0.394192398	0	0.1914804469	4.28587887	CYBSR1,SERPINA1,SCDPD,AHSG,SERPINF2,CD36		
Basolateral Plasma Membrane (GO:0016323)	11/200	0.00798971	0.394192398	0	0.1562587904	3.45191874	SLC26A1,ANXA2,AQP8,SLC23A1,AQP10,MTTP,CA4,SLC5A1,ABCB11,PHBG,CLCN2		
RNA Polymerase III Complex (GO:0005666)	2/16	0.111919166	0.394192398	0	0.3822222222	8.37058497	POLR3D,POLR2E		
Platelet Alpha Granule Membrane (GO:0031092)	2/16	0.111919166	0.394192398	0	0.3822222222	8.37058497	CYBSR1,CD36		
Intermediate Filament (GO:0005862)	5/71	0.13351433	0.394192398	0	0.2099252658	4.41986798	DES,KRT18,KRT5,EVLPL,PPL		
Microbody Membrane (GO:0031093)	4/53	0.123837396	0.418163195	0	0.2186231598	5.66604341	ABCD3,MGST1,SLC27A2,DHRS4		
Peroxisomal Membrane (GO:0005778)	4/53	0.123837396	0.418163195	0	0.2186231598	5.66604341	ABCD3,MGST1,SLC27A2,DHRS4		
Intermediate Filament Cytoskeleton (GO:0045111)	5/78	0.15059108	0.483101429	0	0.1834803848	3.468770412	DES,KRT18,KRT5,EVLPL,PPL		
Actin Cytoskeleton (GO:00115629)	17/361	0.168857072	0.483101429	0	0.137222497	2.42510729	CLUC5,ANXA1,GSN,TNPM2,MYO7B,NPM3,GYS2,VIL1,CNN1,BIN2,NME2,FLNB,FLIP1,MYZAP,MYOZ21,MYOZ22,PLS1		
Podosome (GO:0002102)	2/70	0.16156681	0.483101429	0	0.2972222222	5.41787634	GSN,BN2		
Mitochondrial Outer Membrane (GO:0005741)	9/171	0.166586228	0.483101429	0	0.148941066	2.6869781	HADHB,CYBSA,PGRCM1,DAO,IFR27,AIFM2,MGST3,COX14,RP527A		
H3 Histone Acetyltransferase Complex (GO:0070778)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	INOS		
MOZ/NORF Histone Acetyltransferase Complex (GO:0070776)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	INOS		
Astrocyte End-Foot (GO:0097450)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	CLCN2		
Box C/D RNP Complex (GO:0170049)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	SNU13		
Box C/D Methylation Guide snRNP Complex (GO:0031428)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	SNU13		
External Side of Apical Plasma Membrane (GO:0098591)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	LCT		
Serine Protease Inhibitor Complex (GO:0097180)	1/5	0.167945132	0.483101429	0	0.683079057	11.92340129	PLAU		
Uniplex Complex (									