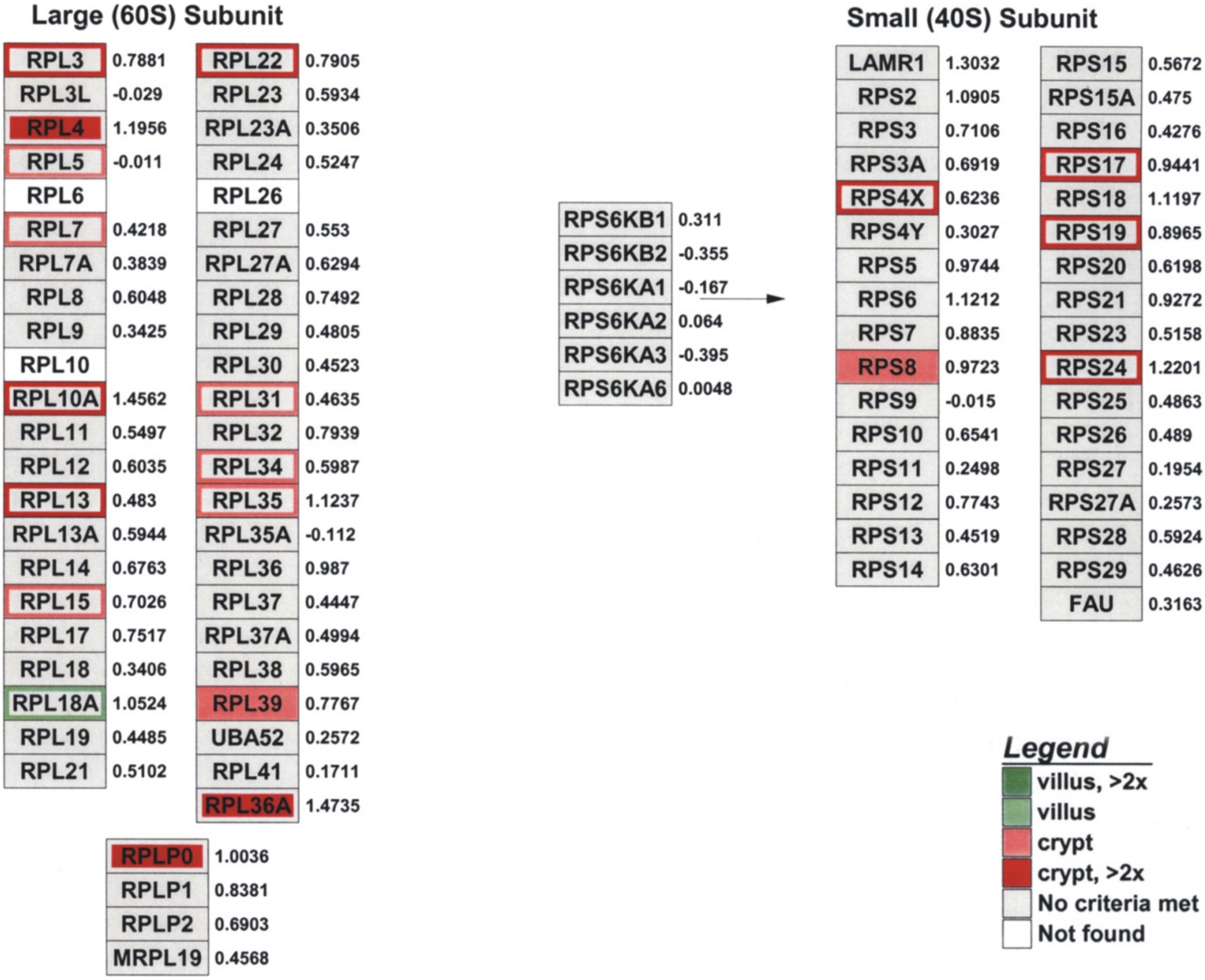


Large (60S) Subunit

RPL3	0.7881	RPL22	0.7905
RPL3L	-0.029	RPL23	0.5934
RPL4	1.1956	RPL23A	0.3506
RPL5	-0.011	RPL24	0.5247
RPL6		RPL26	
RPL7	0.4218	RPL27	0.553
RPL7A	0.3839	RPL27A	0.6294
RPL8	0.6048	RPL28	0.7492
RPL9	0.3425	RPL29	0.4805
RPL10		RPL30	0.4523
RPL10A	1.4562	RPL31	0.4635
RPL11	0.5497	RPL32	0.7939
RPL12	0.6035	RPL34	0.5987
RPL13	0.483	RPL35	1.1237
RPL13A	0.5944	RPL35A	-0.112
RPL14	0.6763	RPL36	0.987
RPL15	0.7026	RPL37	0.4447
RPL17	0.7517	RPL37A	0.4994
RPL18	0.3406	RPL38	0.5965
RPL18A	1.0524	RPL39	0.7767
RPL19	0.4485	UBA52	0.2572
RPL21	0.5102	RPL41	0.1711
		RPL36A	1.4735

RPLP0	1.0036
RPLP1	0.8381
RPLP2	0.6903
MRPL19	0.4568

RPS6KB1	0.311
RPS6KB2	-0.355
RPS6KA1	-0.167
RPS6KA2	0.064
RPS6KA3	-0.395
RPS6KA6	0.0048

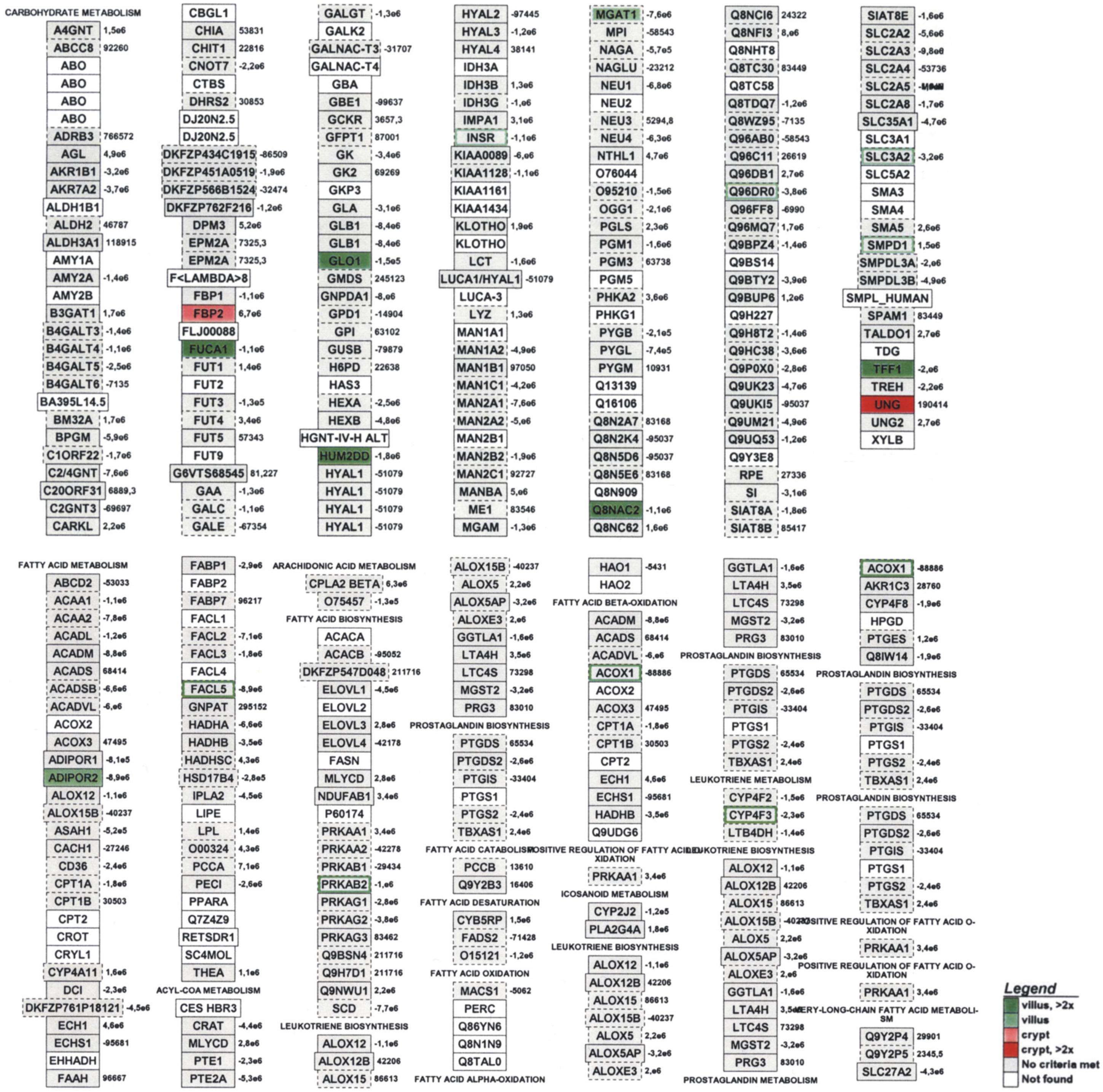
Small (40S) Subunit

LAMR1	1.3032	RPS15	0.5672
RPS2	1.0905	RPS15A	0.475
RPS3	0.7106	RPS16	0.4276
RPS3A	0.6919	RPS17	0.9441
RPS4X	0.6236	RPS18	1.1197
RPS4Y	0.3027	RPS19	0.8965
RPS5	0.9744	RPS20	0.6198
RPS6	1.1212	RPS21	0.9272
RPS7	0.8835	RPS23	0.5158
RPS8	0.9723	RPS24	1.2201
RPS9	-0.015	RPS25	0.4863
RPS10	0.6541	RPS26	0.489
RPS11	0.2498	RPS27	0.1954
RPS12	0.7743	RPS27A	0.2573
RPS13	0.4519	RPS28	0.5924
RPS14	0.6301	RPS29	0.4626
		FAU	0.3163

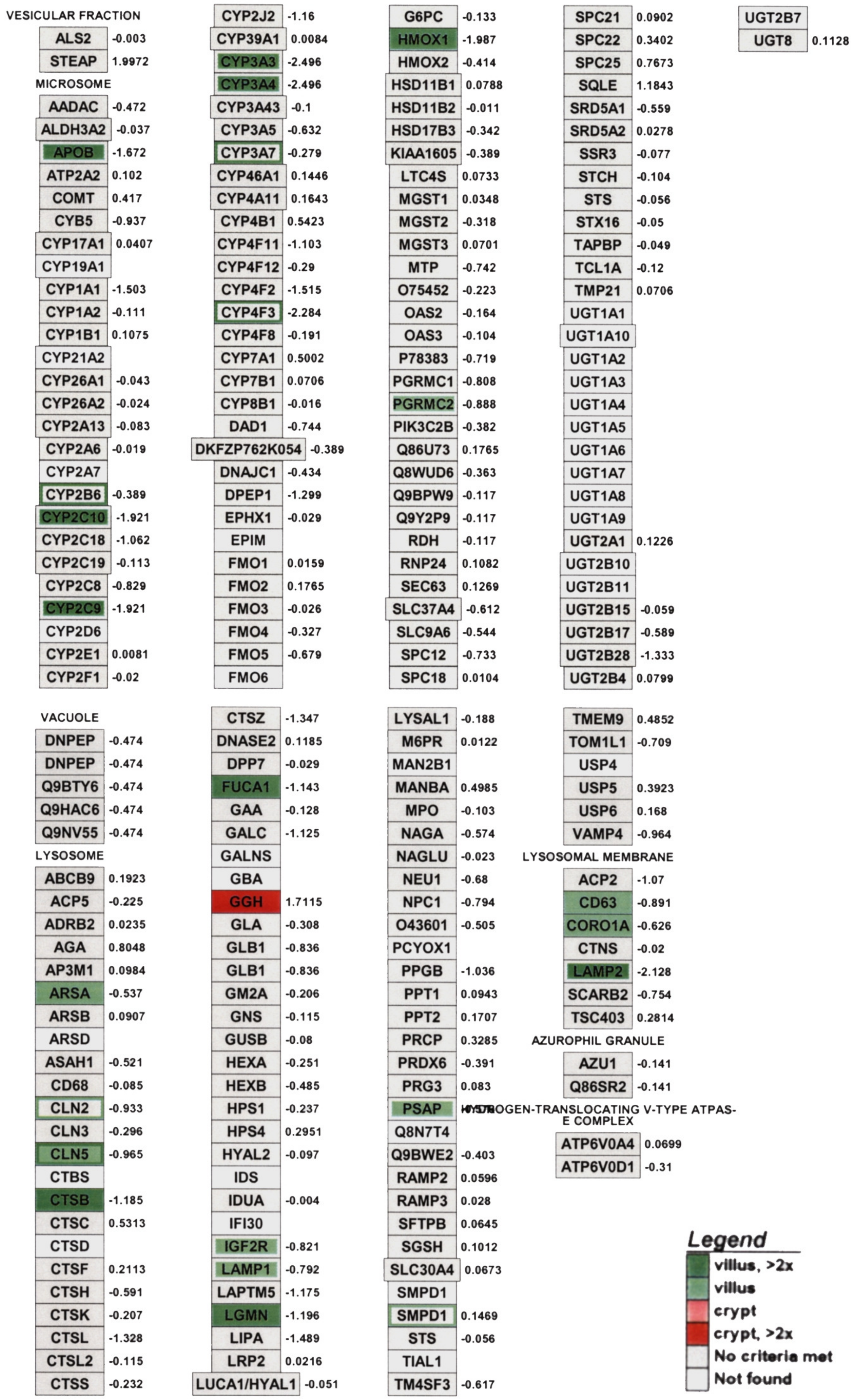
Legend

🟩 villus, >2x
🟩 villus
🟥 crypt
🟥 crypt, >2x
⬜ No criteria met
⬜ Not found

Supplementary fig 1—expression of genes related to ribosomal proteins.



Supplementary fig 2—expression of metabolism related genes.



VESICULAR FRACTION

ALS2	-0.003
STEAP	1.9972

MICROSOME

AADAC	-0.472
ALDH3A2	-0.037
APOB	-1.672
ATP2A2	0.102
COMT	0.417
CYB5	-0.937
CYP17A1	0.0407
CYP19A1	
CYP1A1	-1.503
CYP1A2	-0.111
CYP1B1	0.1075
CYP21A2	
CYP26A1	-0.043
CYP26A2	-0.024
CYP2A13	-0.083
CYP2A6	-0.019
CYP2A7	
CYP2B6	-0.389
CYP2C10	-1.921
CYP2C18	-1.062
CYP2C19	-0.113
CYP2C8	-0.829
CYP2C9	-1.921
CYP2D6	
CYP2E1	0.0081
CYP2F1	-0.02
CYP2J2	-1.16
CYP39A1	0.0084
CYP3A3	-2.496
CYP3A4	-2.496
CYP3A43	-0.1
CYP3A5	-0.632
CYP3A7	-0.279
CYP46A1	0.1446
CYP4A11	0.1643
CYP4B1	0.5423
CYP4F11	-1.103
CYP4F12	-0.29
CYP4F2	-1.515
CYP4F3	-2.284
CYP4F8	-0.191
CYP7A1	0.5002
CYP7B1	0.0706
CYP8B1	-0.016
DAD1	-0.744
DKFZP762K054	-0.389
DNAJC1	-0.434
DPEP1	-1.299
EPHX1	-0.029
EPIM	
FMO1	0.0159
FMO2	0.1765
FMO3	-0.026
FMO4	-0.327
FMO5	-0.679
FMO6	
G6PC	-0.133
HMOX1	-1.987
HMOX2	-0.414
HSD11B1	0.0788
HSD11B2	-0.011
HSD17B3	-0.342
KIAA1605	-0.389
LTC4S	0.0733
MGST1	0.0348
MGST2	-0.318
MGST3	0.0701
MTP	-0.742
O75452	-0.223
OAS2	-0.164
OAS3	-0.104
P78383	-0.719
PGRMC1	-0.808
PGRMC2	-0.888
PIK3C2B	-0.382
Q86U73	0.1765
Q8WUD6	-0.363
Q9BPW9	-0.117
Q9Y2P9	-0.117
RDH	-0.117
RNP24	0.1082
SEC63	0.1269
SLC37A4	-0.612
SLC9A6	-0.544
SPC12	-0.733
SPC18	0.0104
SPC21	0.0902
SPC22	0.3402
SPC25	0.7673
SQLE	1.1843
SRD5A1	-0.559
SRD5A2	0.0278
SSR3	-0.077
STCH	-0.104
STS	-0.056
STX16	-0.05
TAPBP	-0.049
TCL1A	-0.12
TMP21	0.0706
UGT1A1	
UGT1A10	
UGT1A2	
UGT1A3	
UGT1A4	
UGT1A5	
UGT1A6	
UGT1A7	
UGT1A8	
UGT1A9	
UGT2A1	0.1226
UGT2B10	
UGT2B11	
UGT2B15	-0.059
UGT2B17	-0.589
UGT2B28	-1.333
UGT2B4	0.0799
UGT2B7	
UGT8	0.1128

VACUOLE

DNPEP	-0.474
DNPEP	-0.474
Q9BTY6	-0.474
Q9HAC6	-0.474
Q9NV55	-0.474

LYSOSOME

ABCB9	0.1923
ACP5	-0.225
ADRB2	0.0235
AGA	0.8048
AP3M1	0.0984
ARSA	-0.537
ARSB	0.0907
ARSD	
ASAH1	-0.521
CD68	-0.085
CLN2	-0.933
CLN3	-0.296
CLN5	-0.965
CTBS	
CTSB	-1.185
CTSC	0.5313
CTSD	
CTSF	0.2113
CTSH	-0.591
CTSK	-0.207
CTSL	-1.328
CTSL2	-0.115
CTSS	-0.232
CTSZ	-1.347
DNASE2	0.1185
DPP7	-0.029
FUCA1	-1.143
GAA	-0.128
GALC	-1.125
GALNS	
GBA	
GGH	1.7115
GLA	-0.308
GLB1	-0.836
GLB1	-0.836
GM2A	-0.206
GNS	-0.115
GUSB	-0.08
HEXA	-0.251
HEXB	-0.485
HPS1	-0.237
HPS4	0.2951
HYAL2	-0.097
IDS	
IDUA	-0.004
IFI30	
IGF2R	-0.821
LAMP1	-0.792
LAPTM5	-1.175
LGMN	-1.196
LIPA	-1.489
LRP2	0.0216
LUCA1/HYAL1	-0.051
LYSAL1	-0.188
M6PR	0.0122
MAN2B1	
MANBA	0.4985
MPO	-0.103
NAGA	-0.574
NAGLU	-0.023
NEU1	-0.68
NPC1	-0.794
O43601	-0.505
PCYOX1	
PPGB	-1.036
PPT1	0.0943
PPT2	0.1707
PRCP	0.3285
PRDX6	-0.391
PRG3	0.083
PSAP	[illegible]
Q8N7T4	
Q9BWE2	-0.403
RAMP2	0.0596
RAMP3	0.028
SFTPB	0.0645
SGSH	0.1012
SLC30A4	0.0673
SMPD1	
SMPD1	0.1469
STS	-0.056
TIAL1	
TM4SF3	-0.617
TMEM9	0.4852
TOM1L1	-0.709
USP4	
USP5	0.3923
USP6	0.168
VAMP4	-0.964

LYSOSOMAL MEMBRANE

ACP2	-1.07
CD63	-0.891
CORO1A	-0.626
CTNS	-0.02
LAMP2	-2.128
SCARB2	-0.754
TSC403	0.2814

AZUROPHIL GRANULE

AZU1	-0.141
Q86SR2	-0.141

HYDROGEN-TRANSLOCATING V-TYPE ATPASE COMPLEX

ATP6V0A4	0.0699
ATP6V0D1	-0.31

Legend

🟩	villus, >2x
🟩	villus
🟥	crypt
🟥	crypt, >2x
⬜	No criteria met
⬜	Not found

Supplementary fig 3—expression of vesicle/transport related genes