

Table ST1. gene ranking reports the most common genes selected by the algorithm in the various signatures. The second column reports the number of signature containing the corresponding gene and third column is its average importance index.

Gene	Counts	Average importance
AKAP12	8	85.93
DCBLD2	3	79.31
NT5E	2	51.87
NPR3	2	54.74
AGPAT5	2	25.67
ADIPOQ	2	30.59
244026_at	1	54.46
SLFN5	1	27.81
243820_at	1	31.04
NGEF	1	69.11
LONRF3	1	92.05
241867_at	1	56.53
ULBP2	1	59.97
EFHA2	1	39.07
238109_at	1	35.5
FOXA1	1	17.26
236795_at	1	46.72
ISM1	1	71.58
METTL4	1	18.09
231989_s_at	1	12.7
KIAA1462	1	29.18
230711_at	1	35.93
DCBLD2	1	66.28
ADAMTS5	1	30.84
EMID2	1	10.99
LOC100132891	1	20.25
AKAP12	1	87.62
FST	1	99.37
FAM217B	1	33.84
SLC44A2	1	12.59
ARHGAP9	1	23.95
ATL3	1	35.78
AP2A1	1	95.31
ETV1	1	96.72
EHD2	1	11.03
NOL3	1	99.99
C17orf48	1	13.27

SNX16	1	35.38
PITPNC1	1	15.75
FERMT1	1	47.58
U2AF2	1	15.23
EI24	1	39.88
POSTN	1	40.43
CLDN8	1	19.16
DNAJC4	1	13.54
DUSP7	1	54.46
GUSBP11	1	29.28
KIAA1462	1	39.18
CDR2L	1	31.2
APLP2	1	24.59
CTGF	1	32.83
RAB2A	1	69.69
ABI2	1	30.36
ST18	1	63.36
PCSK5	1	36.88
DZIP1	1	57.28
C11orf9	1	50.99
ADCY7	1	30.69
CDK1	1	21.17
GMFB	1	56.85
PAPPA	1	84.23
1569202_x_at	1	42.03
SRGAP2P1	1	34.41
1563467_at	1	19.51
SLC25A43	1	23.38
1556983_a_at	1	48.01
UGGT2	1	45.31
CD96	1	81.97
CPO	1	12.64
KCNH8	1	44.47
MGC16703	1	86.56
ACACB	1	19.74
C6orf141	1	11.22