Supplementary Table 2: **Methylation profiling:** Differentially methylated genes between the three methylation clusters (methylation cluster 1, n=18; methylation cluster 2, n=24; methylation cluster 3, n=50; the 100 genes with the smallest p-values are listed). Correction for multiple testing was performed using the Benjamini-Hochberg method. Genes were considered significantly differentially methylated between groups when displaying an FDR adjusted p-value <0.05.

Methylation cluster 1 versus methylation cluster 2.

SYMBOL	median diff.	T-statistic	p-value	adjusted p-value
LHX2	0,459237027	16,76088	3,64E-18	6,59E-14
SESN3	0,42306644	11,93066	9,52E-15	8,62E-11
RAX	0,457901089	11,76235	1,55E-14	9,33E-11
PMAIP1	0,304390456	11,69908	2,63E-14	1,19E-10
RBM20	0,308408869	11,70531	6,12E-14	2,22E-10
LDLRAD3	0,360139889	10,70699	8,42E-13	2,54E-09
KCNQ5	0,471142034	11,47806	1,75E-12	4,15E-09
PAK6	0,28235764	11,74461	1,83E-12	4,15E-09
MAP3K14	0,358352749	10,02777	2,09E-12	4,21E-09
MEGF11	0,423910534	9,615476	9,3E-12	1,68E-08
LASP1	0,293811652	10,31275	1,4E-11	2,31E-08
C20orf103	0,265009673	9,465886	1,62E-11	2,45E-08
MMS19	0,299686066	9,244322	1,77E-11	2,47E-08
C6orf81	0,222432087	9,181392	2,41E-11	3,12E-08
RP11-404L6.2	0,195446453	9,067171	3,08E-11	3,63E-08
C9orf47	0,160946731	11,19667	3,41E-11	3,63E-08
S1PR3	0,160946731	11,19667	3,41E-11	3,63E-08
S1PR5	0,242868563	9,242821	4,07E-11	4,09E-08
SIX2	0,3706194	10,8165	7,04E-11	6,71E-08
RASL10B	0,176114712	8,590157	1,59E-10	1,44E-07
KL	0,368458925	8,668613	2,46E-10	2,05E-07
KDR	0,369903823	8,932909	2,61E-10	2,05E-07
C18orf1	0,301973733	9,817091	2,71E-10	2,05E-07
ASGR2	0,197100928	8,424958	2,71E-10	2,05E-07
AQP4	0,26391902	8,374578	3,16E-10	2,29E-07
NCRNA00346	0,326485071	8,606412	3,34E-10	2,33E-07
FAM19A2	0,390398171	8,245951	3,87E-10	2,59E-07
HPD	0,373600571	8,267813	4,74E-10	3,07E-07
CHST15	0,288151059	10,30749	4,97E-10	3,1E-07
ALDH5A1	0,227361147	8,101723	6,34E-10	3,79E-07
C5orf38	-0,472660393	-8,91831	6,48E-10	3,79E-07
MSTN	0,273602577	8,308044	7,25E-10	4,1E-07
PDS5B	0,317872721	8,176142	7,81E-10	4,29E-07
TAL2	0,394469533	8,145972	8,47E-10	4,51E-07
FAM53B	0,224447018	8,680474	8,9E-10	4,57E-07
GABBR1	0,232711957	8,020983	9,54E-10	4,57E-07
CD8A	0,379713949	8,096114	9,67E-10	4,57E-07
MSC	0,294569308	8,155565	9,83E-10	4,57E-07

DUSP5	0,344858004	8,168202	9,9E-10	4,57E-07
DMRT3	0,455031144	10,46736	1,01E-09	4,57E-07
C1orf111	0,295952304	8,281449	1,08E-09	4,79E-07
SPRED1	0,130586014	8,054068	1,16E-09	5E-07
TMPRSS2	0,379093871	8,56841	1,24E-09	5,23E-07
DLEU1	0,15176607	7,808742	1,44E-09	5,9E-07
EHF	0,213362071	7,90141	1,47E-09	5,9E-07
PREX1	0,32050596	7,804692	1,55E-09	6,12E-07
GPLD1	0,200754043	8,51808	1,71E-09	6,6E-07
PPP1R1B	0,293802285	8,789722	1,86E-09	7E-07
C1orf132	0,329639254	7,873635	1,9E-09	7,03E-07
SPN	0,38834597	7,703826	2,05E-09	7,27E-07
QPRT	0,38834597	7,703826	2,05E-09	7,27E-07
CHRNB1	0,367301183	7,755825	2,2E-09	7,67E-07
IRX2	-0,454740245	-8,58194	2,29E-09	7,82E-07
SLC1A4	0,226482736	7,682145	2,38E-09	7,99E-07
PIGS	0,278125521	7,636285	2,48E-09	8,15E-07
FAM110A	0,16498818	7,985576	2,53E-09	8,17E-07
MASP1	0,329107153	8,177626	3,3E-09	1,04E-06
C1orf130	0,190259813	7,827935	3,33E-09	1,04E-06
SH2D2A	0,238709	8,003443	3,53E-09	1,08E-06
C8orf31	-0,308882438	-7,63085	3,58E-09	1,08E-06
KCNK15	0,36776578	8,082395	3,67E-09	1,08E-06
METTL11A	0,276819207	8,315137	3,68E-09	1,08E-06
MEGF10	0,31792315	8,979228	3,84E-09	1,1E-06
CREB5	0,210275285	8,059765	3,88E-09	1,1E-06
CTGF	0,181508333	7,548805	4E-09	1,11E-06
ST14	0,274816515	8,270421	4,12E-09	1,13E-06
B4GALT6	0,269794961	8,561605	4,22E-09	1,14E-06
DGKG	0,148490939	7,526293	4,52E-09	1,2E-06
ABCD3	0,155917316	8,114357	5,08E-09	1,33E-06
TMEM229B	0,212965996	7,584261	5,51E-09	1,42E-06
SULF2	0,284973246	8,601782	6,42E-09	1,64E-06
TXLNB	0,355599915	7,639829	7,83E-09	1,97E-06
AL135998.1	0,307715816	7,598293	8,93E-09	2,22E-06
KRTAP10-1	0,115619235	7,420912	9,42E-09	2,3E-06
CTSD	0,176988649	7,442351	1,02E-08	2,47E-06
FEZF2	0,407581755	8,349644	1,04E-08	2,49E-06
TMEM154	0,305005549	7,96205	1,18E-08	2,78E-06
SLC39A14	0,211786402	7,095191	1,39E-08	3,22E-06
OLFML2A	0,226556179	7,283486	1,5E-08	3,44E-06
DLX5	0,391976525	7,232285	1,69E-08	3,82E-06
GATA3	0,283967358	7,162342	1,77E-08	3,97E-06
C20orf46	0,213448291	7,018099	1,84E-08	3,98E-06
SLC9A10	0,274562841	7,254994	1,84E-08	3,98E-06
OR11A1	-0,153326412	-7,06202	1,84E-08	3,98E-06
IL24	0,104494865	7,234772	1,92E-08	4,09E-06
NR4A3	0,361564065	6,986313	1,96E-08	4,13E-06
MERTK	0,196571583	7,237583	2,04E-08	4,25E-06
FAM165B	0,137361414	7,001882	2,17E-08	4,46E-06
SNX31	0,198502821	7,039382	2,22E-08	4,48E-06

RRP1B	-0,477011735	-9,1154	2,26E-08	4,48E-06
HSF2BP	-0,477011735	-9,1154	2,26E-08	4,48E-06
PPP1R3C	0,223794957	6,984303	2,27E-08	4,48E-06
FAM131A	0,262724862	7,307224	2,31E-08	4,5E-06
LAMA2	0,245204549	7,394504	2,6E-08	4,94E-06
GALNT9	-0,245386329	-7,182	2,6E-08	4,94E-06
CXCL2	0,23821851	6,896296	2,62E-08	4,94E-06
GNG4	0,316735468	6,913833	2,86E-08	5,34E-06
SEPT4	0,203838557	6,965689	2,98E-08	5,51E-06
KLB	0,440463767	7,721573	3,17E-08	5,81E-06
DIXDC1	0,131423823	6,874488	3,22E-08	5,83E-06

Methylation cluster 1 versus methylation cluster 3.

SYMBOL	median diff.	T-statistic	p-value	adjusted p-value
ZNF701	-0,27764	-13,4254	2,87E-19	5,2E-15
ANKK1	-0,6136	-15,618	3,75E-18	2,3E-14
SLC8A3	-0,45439	-12,212	3,81E-18	2,3E-14
POU4F3	-0,28014	-11,6725	1,33E-17	6,02E-14
GPR25	-0,46879	-13,1529	3,84E-17	1,39E-13
NR5A2	-0,5087	-11,6011	4,71E-17	1,42E-13
ANK1	-0,57376	-12,1573	6,95E-16	1,8E-12
PCDHGC5	-0,52661	-10,8001	1,08E-15	2,44E-12
SHMT2	-0,38973	-10,7646	1,34E-15	2,7E-12
AC090098.1	0,348705	10,34536	1,92E-15	3,45E-12
ITGAL	-0,49348	-11,8899	2,26E-15	3,45E-12
CD1A	0,313928	10,43853	2,29E-15	3,45E-12
NMT1	0,262126	10,2596	2,68E-15	3,73E-12
HOXD13	-0,43624	-12,3916	5,59E-15	7,23E-12
CALCB	-0,58874	-12,7354	6,27E-15	7,57E-12
CYP1A1	-0,3588	-12,5801	7,84E-15	8,87E-12
OR8K1	0,298445	10,01836	1,07E-14	1,14E-11
EN1	-0,23136	-9,8632	1,32E-14	1,33E-11
OR6K6	0,271313	9,835207	1,47E-14	1,4E-11
PCDHGC4	-0,49801	-10,4002	1,68E-14	1,52E-11
ZIC4	-0,57236	-10,8343	3,09E-14	2,67E-11
FTMT	0,286279	9,55958	4,46E-14	3,67E-11
PLAC1L	0,270911	9,698521	5,68E-14	4,47E-11
PRDM14	-0,38673	-11,3225	9,82E-14	7,41E-11
PPBP	0,347585	9,511983	1,11E-13	8,08E-11
CCDC81	-0,28608	-11,5474	1,78E-13	1,24E-10
NAT10	0,147099	9,171194	2,61E-13	1,74E-10
NPFF	0,315642	9,831009	2,69E-13	1,74E-10
DARC	0,415528	9,094306	3,67E-13	2,22E-10
PTGER2	0,27642	9,18517	3,74E-13	2,22E-10
EOMES	-0,17943	-9,48899	3,81E-13	2,22E-10
OR6C6	0,227617	9,036195	4,12E-13	2,3E-10
PPEF2	0,334802	9,265531	4,26E-13	2,3E-10
PALM2-AKAP2	0,338527	9,063493	4,45E-13	2,3E-10
AKAP2	0,338527	9,063493	4,45E-13	2,3E-10

ZAP70	-0,34994	-9,89104	4,75E-13	2,35E-10
C9orf85	0,164249	8,976086	4,81E-13	2,35E-10
MAMDC2	-0,39826	-10,7313	5,78E-13	2,75E-10
OR10K2	0,287814	9,369155	6,07E-13	2,82E-10
PIGR	-0,39187	-11,8492	8,2E-13	3,63E-10
EBF1	-0,52538	-11,3989	8,22E-13	3,63E-10
LAG3	0,343007	9,361982	9,89E-13	4,24E-10
ARHGEF26	-0,28899	-8,96704	1,01E-12	4,24E-10
C11orf54	0,191722	8,775572	1,14E-12	4,52E-10
TAF1D	0,191722	8,775572	1,14E-12	4,52E-10
TNIK	-0,37155	-10,8098	1,15E-12	4,52E-10
BTN1A1	-0,33531	-8,76309	1,18E-12	4,56E-10
CD53	0,320357	9,56731	1,21E-12	4,57E-10
OR6N2	0,319501	8,949206	1,96E-12	7,23E-10
FAM167B	-0,44928	-9,55185	2,06E-12	7,45E-10
OR2T6	0,235445	8,598027	2,62E-12	9,32E-10
RNF167	0,250724	8,578949	3,02E-12	1,01E-09
SLC25A11	0,250724	8,578949	3,02E-12	1,01E-09
AATF	-0,25029	-9,02346	3,04E-12	1,01E-09
OR10J5	0,224953	8,540932	3,05E-12	1,01E-09
MAPK10	-0,31746	-9,24485	3,26E-12	1,05E-09
VSX2	-0,25458	-8,76791	4,15E-12	1,32E-09
C3orf63	0,27007	8,434923	4,59E-12	1,43E-09
TNNC2	-0,32148	-8,86615	5,79E-12	1,78E-09
SNAPC5	0,207965	8,889018	5,96E-12	1,8E-09
KCNK2	0,304723	8,423144	6,9E-12	2,05E-09
SENP6	0,159338	8,503689	7,14E-12	2,09E-09
RBM5	0,185756	8,421353	7,54E-12	2,17E-09
ATP5B	0,195675	8,315281	7,75E-12	2,19E-09
OR6C74	0,341786	8,829101	9,12E-12	2,54E-09
GABRB2	-0,12112	-8,33341	9,27E-12	2,54E-09
OR6C3	0,242178	8,300873	9,62E-12	2,6E-09
OR10T2	0,324871	8,260927	1,04E-11	2,77E-09
SST	0,258881	8,803299	1,06E-11	2,77E-09
TMPRSS11F	0,247861	8,199343	1,17E-11	3,02E-09
OR4D6	0,264712	8,366908	1,23E-11	3,14E-09
RNF111	0,151005	8,189983	1,31E-11	3,26E-09
SLCO1C1	0,383073	8,301737	1,35E-11	3,26E-09
UBB	0,196593	8,434834	1,36E-11	3,26E-09
ADAM12	-0,46693	-8,86772	1,37E-11	3,26E-09
IDI2	0,405176	8,558495	1,38E-11	3,26E-09
EVX2	-0,29003	-9,28364	1,38E-11	3,26E-09
NUDT9	0,238172	8,208318	1,45E-11	3,37E-09
TIMP3	0,295791	8,52929	1,57E-11	3,57E-09
RRH	0,335432	8,524068	1,58E-11	3,57E-09
GNAQ	-0,11932	-8,11363	1,67E-11	3,73E-09
TELO2	0,265363	8,324775	1,7E-11	3,75E-09
HLX	-0,3889	-9,70416	1,75E-11	3,8E-09
RP11-542P2.1	-0,30696	-8,15172	1,76E-11	3,8E-09
CCT4	0,327336	8,078014	1,98E-11	4,21E-09
OSR2	-0,41564	-10,3744	2,48E-11	5,17E-09

ADAMTS1	-0,24492	-8,52989	2,48E-11	5,17E-09
NR3C2	-0,1291	-8,13207	2,71E-11	5,57E-09
SYT4	0,378887	8,572356	2,79E-11	5,59E-09
GTF2I	0,264282	7,988684	2,8E-11	5,59E-09
GNG8	-0,24911	-8,53169	2,81E-11	5,59E-09
ADPRHL1	0,279854	8,122394	2,84E-11	5,6E-09
LYPD2	0,260601	8,398465	3,02E-11	5,88E-09
TXNRD1	-0,58021	-10,4661	3,12E-11	5,98E-09
KLRC4	0,284207	8,211138	3,14E-11	5,98E-09
KLLN	-0,19878	-7,94059	3,38E-11	6,35E-09
PYHIN1	0,326126	8,145323	3,4E-11	6,35E-09
CD5L	0,323332	7,975074	3,88E-11	7,16E-09
TAL1	-0,36442	-9,70997	3,93E-11	7,2E-09
PTEN	-0,19595	-7,89587	4,1E-11	7,42E-09

Methylation cluster 2 versus methylation cluster 3.

SYMBOL	median diff.	T-statistic	p-value	adjusted p-value
HLF	-0,61625	-26,3177	1,39E-38	2,52E-34
SOX2	-0,62376	-24,4961	1,18E-36	1,07E-32
SIX6	-0,52924	-24,5201	4,82E-36	2,91E-32
DLX4	-0,63074	-23,7154	1,17E-35	5,29E-32
ARL5C	-0,6343	-23,4401	4,62E-35	1,67E-31
MEIS1	-0,55921	-22,7248	1,43E-34	4,31E-31
ZIC1	-0,58565	-22,8476	3,8E-34	9,83E-31
TAL1	-0,47138	-22,0229	1,29E-33	2,93E-30
TLX1	-0,41685	-21,3368	1,17E-32	2,35E-29
SIX2	-0,52226	-26,4203	2,13E-32	3,85E-29
SOX9	-0,49605	-21,0608	3,51E-32	5,79E-29
VAX1	-0,55105	-20,6497	1,04E-31	1,56E-28
CALCB	-0,61952	-20,6122	1,12E-31	1,56E-28
NKX3-2	-0,54025	-20,8104	2,14E-31	2,77E-28
PDGFRA	-0,61578	-21,2699	2,74E-31	3,31E-28
TMEM171	-0,41869	-21,2482	1,39E-30	1,57E-27
TBX4	-0,61565	-23,6703	3,27E-30	3,48E-27
VAX2	-0,50646	-20,3375	1,39E-29	1,4E-26
PRDM14	-0,48913	-19,4726	1,99E-29	1,9E-26
HOXD13	-0,45444	-18,8809	2,24E-29	1,98E-26
OSR2	-0,48975	-19,7575	2,3E-29	1,98E-26
PRAC	-0,4578	-18,7522	3,23E-29	2,66E-26
FEZF1	-0,4667	-18,3678	7,15E-29	5,52E-26
C11orf20	-0,41413	-20,2851	7,31E-29	5,52E-26
LY75	-0,64746	-18,1877	1,31E-28	9,15E-26
LY75-CD302	-0,64746	-18,1877	1,31E-28	9,15E-26
ACTC1	-0,47519	-18,0529	1,93E-28	1,3E-25
GYPC	-0,3913	-18,5292	2,05E-28	1,33E-25
TCF21	-0,47818	-18,4745	2,61E-28	1,63E-25
SHISA3	-0,44915	-20,3567	3,15E-28	1,9E-25
TBX15	-0,49679	-18,0653	3,79E-28	2,21E-25

ADCYAP1R1	-0,3732	-18,6464	5,69E-28	3,16E-25
C2CD4B	-0,53864	-17,7535	5,77E-28	3,16E-25
TNIK	-0,40409	-17,497	1,29E-27	6,87E-25
CYP11A1	-0,56655	-18,1166	1,54E-27	7,97E-25
CACNA2D3	-0,42306	-17,5216	2,24E-27	1,13E-24
DMRT2	-0,45865	-17,3183	2,6E-27	1,27E-24
STRA6	0,414053	17,43725	2,9E-27	1,38E-24
ESRP2	-0,54298	-17,5109	3,45E-27	1,6E-24
CALCA	-0,55738	-17,6862	1E-26	4,55E-24
C9orf47	-0,26215	-16,8668	1,6E-26	6,91E-24
S1PR3	-0,26215	-16,8668	1,6E-26	6,91E-24
CCNA1	-0,53167	-18,1718	1,86E-26	7,83E-24
C2orf40	-0,59829	-16,7464	2,72E-26	1,12E-23
LHX2	-0,40989	-18,3722	2,9E-26	1,17E-23
LMO3	-0,51051	-22,6844	5,49E-26	2,16E-23
GABRG2	-0,40566	-16,2759	9,34E-26	3,6E-23
RTP4	-0,29583	-16,1936	1,16E-25	4,39E-23
FXR1	-0,43666	-16,5867	1,66E-25	6,15E-23
FHL3	-0,37875	-16,0516	2,45E-25	8,89E-23
ZNF750	0,346853	16,84456	2,88E-25	1,02E-22
CFTR	-0,62019	-16,4117	3,45E-25	1,2E-22
TLX2	-0,55852	-15,828	3,81E-25	1,3E-22
CTC-203F4.1	-0,50742	-15,8341	4,7E-25	1,58E-22
NCK2	-0,33204	-15,8191	5,22E-25	1,72E-22
B4GALT6	-0,36924	-17,9756	5,76E-25	1,86E-22
LEF1	-0,36351	-15,9876	6,15E-25	1,95E-22
ENPP2	-0,3312	-16,0856	1,51E-24	4,72E-22
ANK1	-0,5809	-15,415	1,79E-24	5,5E-22
SSPN	-0,36409	-15,3848	1,86E-24	5,6E-22
P2RX7	-0,43085	-16,2124	1,92E-24	5,71E-22
HIST1H4A	-0,52018	-15,3812	2,05E-24	6E-22
SULF2	-0,31839	-18,8338	2,1E-24	6,02E-22
LECT1	-0,6554	-15,9546	2,13E-24	6,02E-22
IZUMO4	0,470086	15,38767	2,26E-24	6,31E-22
STON2	-0,58836	-15,7739	2,46E-24	6,74E-22
GALNT3	-0,49832	-15,2702	2,92E-24	7,89E-22
OTX1	-0,49424	-18,6604	3,04E-24	8,1E-22
SLC2A5	-0,30765	-15,2269	3,37E-24	8,85E-22
CLIC5	-0,41322	-15,2724	4,23E-24	1,09E-21
LHX9	-0,54166	-15,1909	4,43E-24	1,13E-21
HIST1H3A	-0,55768	-15,1765	4,83E-24	1,2E-21
HIST1H1A	-0,55768	-15,1765	4,83E-24	1,2E-21
LAMC2	-0,62221	-15,4263	5,12E-24	1,25E-21
WWP2	0,326621	15,11809	6,38E-24	1,49E-21
RSRC1	-0,42317	-15,4249	6,43E-24	1,49E-21
SHOX2	-0,42317	-15,4249	6,43E-24	1,49E-21
AC112502.1	-0,42317	-15,4249	6,43E-24	1,49E-21
NTRK2	-0,39522	-15,2082	6,69E-24	1,53E-21
DOK6	-0,51572	-15,3084	7,76E-24	1,76E-21
HOXB13	-0,38912	-14,9633	8,64E-24	1,93E-21
CCDC81	-0,29283	-15,5301	9E-24	1,99E-21

BHLHE41	-0,29277	-15,2371	1,11E-23	2,41E-21
MEGF10	-0,4801	-15,0624	1,12E-23	2,41E-21
MAMDC2	-0,39043	-14,9725	1,19E-23	2,54E-21
EREG	-0,43461	-16,1623	1,21E-23	2,55E-21
TM2D3	0,405798	14,87456	1,23E-23	2,56E-21
ELN	-0,27345	-16,5453	1,25E-23	2,57E-21
ALX1	-0,55848	-15,1255	1,44E-23	2,94E-21
ALPL	-0,26052	-16,4576	1,48E-23	2,98E-21
GATA4	-0,45554	-17,1492	1,59E-23	3,16E-21
MOBKL2A	0,454906	14,80364	1,6E-23	3,16E-21
LASP1	-0,4061	-16,2578	1,74E-23	3,39E-21
PITX1	-0,48475	-14,9196	2,55E-23	4,91E-21
PAX5	-0,33027	-14,7058	2,7E-23	5,15E-21
BARHL2	-0,51413	-14,4991	4,75E-23	8,95E-21
PIP5K1B	-0,20056	-14,5065	4,91E-23	9,16E-21
C10orf116	-0,57078	-17,2996	6,19E-23	1,14E-20
LRRIQ4	0,329337	14,43123	6,6E-23	1,21E-20
CNTN2	-0,41901	-15,0834	6,73E-23	1,22E-20