**Supplementary Data 3.** Relationship between the raw methylation data per sample, average difference between groups, and relationship to the TSS and transcript expression.

Top left panel: The Y axis represents difference in relative methylation between the ulcerative colitis and normal groups. The X-axis shows the position relative to the TSS site defined as 0. Negative numbers are upstream of TSS, positive numbers downstream. Top right panel: Legend of top left panel.

Bottom left panel: The raw methylation data per patient. The X scale is the same as the top left panel. The Y-axis shows relative methylation, 1 for 100% methylated, 0 for not methylated, 0.5 for 50% methylated.

A point represent the relative methylation value for a sample at a particular location. Dotted lines connect same samples between positions. Red points and dotted lines are from Ulcerative Colitis samples, blue from normal samples.

Bottom right panel: Shows a boxplot of the normalized log2 values of the transcript corresponding to the promoter.





ACAP1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.31













#### ADGRE1 average UC-N %methylation max=-4.33% min=-31.52%









## ADGRE2 average UC-N %methylation max=-5.85% min=-31.52%



ADGRE2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.73



### ADGRG5 average UC-N %methylation max=-14.26% min=-34.46%



ADGRG5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.54









ADH1C raw %methylation, red=UC, blue=Normal







#### ADH6 average UC-N %methylation max=21.6% min=7.39%



ADH6 raw %methylation, red=UC, blue=Normal







ADIRF raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.88

Cond



ADIRF average UC–N %methylation max=13.83% min=–11.74%

methylation info

1.0

0.8

0.6

0.4

0.2

0.0

-2900

-2800

methylation info



methylation info



AGMO raw %methylation, red=UC, blue=Normal









ALOX12B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.47







8

•

••

Cond

%methlation UC-N

cpg site





ALPK2 raw %methylation, red=UC, blue=Normal







ALPL raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.23





methylation info

ANKRD62 raw %methylation, red=UC, blue=Normal







ANXA1 raw %methylation, red=UC, blue=Normal

log2(court)

RNAseq logFC(UC-N)= 1.16





Т

-200

-400

-300

T -100



0

100

200

RNAseq logFC(UC-N)= 1.1





Ν

Т

UC

methylation info







APOBEC3G raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.36



APOBEC3G average UC-N %methylation max=7.92% min=-27.22%



AQP9 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 5.37



ARHGAP30 average UC-N %methylation max=-25.58% min=-45.19%



ARHGAP30 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.13





ARHGDIB raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.12





BASP1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.48



methylation info



BATF raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.1



methylation info



BCAS4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.12





methylation info



BCHE raw %methylation, red=UC, blue=Normal







#### BHLHE40 average UC-N %methylation max=1.23% min=-13.54%

BHLHE40 raw %methylation, red=UC, blue=Normal





BISPR average UC-N %methylation max=-14.18% min=-30.57%



BISPR raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.37





BLK raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.56



BLK average UC-N %methylation max=-10.15% min=-21.51%



-1000



-2500



-2000

-1500

RNAseq logFC(UC-N)= -1.74





BTLA raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.14



methylation info





BTNL3 raw %methylation, red=UC, blue=Normal







BTNL8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.41



methylation info



methylation info

BZRAP1-AS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.07





# C11orf21 average UC-N %methylation max=-4.31% min=-31.35%

Cond

%methlation UC-N

cpg site

e dnase1 site

enhancer site



C16orf54 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.13



C16orf54 average UC-N %methylation max=-16.15% min=-51.35%



RNAseq logFC(UC-N)= 3.72





methylation info


200



C2CD4B raw %methylation, red=UC, blue=Normal

methylation info







0

.

1

•

200

4

C4BPA average UC-N %methylation max=11.04% min=-13.4%

-200

-400

methylation info

0.2

-600

Cond

Ν

Т

UC

%methlation UC-N



C5AR1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.18





C6orf223 average UC-N %methylation max=7.35% min=-31.91%



C6orf223 raw %methylation, red=UC, blue=Normal

















CASS4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.07







CCDC183 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.36





methylation info

methylation info

10.0 log2(count) 0.4 9.5 9.0 0.2 8.5 0.0 8.0 Т -2000 -1500 -1000 -500 Ν UC





CCL22 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.46









RNAseq logFC(UC-N)= 1.7





CCR5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.09





CCR7 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.96



methylation info



CD180 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.22



## CD19 average UC-N %methylation max=-10.63% min=-39.48%



CD19 raw %methylation, red=UC, blue=Normal

1.0 0.8 methylation info 0.6 0.4 0.2 0.0 -100 -300 -200 0 100 -400

RNAseq logFC(UC–N)= 2.52



## CD247 average UC-N %methylation max=-6.76% min=-30.23%



CD247 raw %methylation, red=UC, blue=Normal







CD28 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.35



methylation info



CD2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.09





CD300E raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.44



•

•

0

200



CD38 raw %methylation, red=UC, blue=Normal

-200

-400

RNAseq logFC(UC–N)= 1.88



methylation info

-600



RNAseq logFC(UC-N)= 1.34



methylation info









CD3G raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.09



CD3G average UC-N %methylation max=-10.04% min=-25.87%







CD52 average UC-N %methylation max=-11.68% min=-34.01%



RNAseq logFC(UC–N)= 1.35





CD53 raw %methylation, red=UC, blue=Normal



RNAseq logFC(UC-N)= 1.07



methylation info



CD69 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.08





CD6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.45





CD74 raw %methylation, red=UC, blue=Normal





CD74 average UC-N %methylation max=-1.23% min=-4.05%





CD79A raw %methylation, red=UC, blue=Normal

















CD7 raw %methylation, red=UC, blue=Normal

1.0 0.8 methylation info 0.6 0.4 0.2 0.0 -150 -100 -50 100 150 0 50

RNAseq logFC(UC–N)= 1.23







CD80 average UC-N %methylation max=-1.26% min=-26.5%





Cond

Т

UC





CDHR1 raw %methylation, red=UC, blue=Normal







## CELSR1 average UC-N %methylation max=17.03% min=-27.13%



CELSR1 raw %methylation, red=UC, blue=Normal









CETP raw %methylation, red=UC, blue=Normal

1.0 0.8 methylation info 0.6 • 0.4 0.2 0.0 Т -1200 -1000 -200 200 -800 -600 -400 0

RNAseq logFC(UC-N)= 2.06







CFP raw %methylation, red=UC, blue=Normal

1.0 ω 0.8  $\sim$ methylation info 0.6 log2(count) ဖ 0.4 0.2 S 0.0 Т -100 Ν -500 -400 -300 -200 100 0

## RNAseq logFC(UC-N)= 1.82












CHRDL2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.34





# CHST11 average UC-N %methylation max=19.31% min=-16.51%







CHST2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.04



methylation info







RNAseq logFC(UC-N)= 1.81





CLDN8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.9





-200

0



CLIC6 average UC-N %methylation max=-4.28% min=-34.57%

Cond

Ν

Т

UC

ß

0.2

0.0

-1000

-800

Т

-600

-400



CNR2 average UC-N %methylation max=0.44% min=-16.45%



CNR2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.68







CPA6 raw %methylation, red=UC, blue=Normal

 $\operatorname{uetrylation irlo}_{-150}$ 

RNAseq logFC(UC–N)= -1.38





• ; :

%methlation UC-N

cpg site

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CSF2RB raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.49





CSF3R raw %methylation, red=UC, blue=Normal



RNAseq logFC(UC-N)= 2.63





CST7 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.56















CTSK raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.23





CXCL10 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.2





CXCL5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 4.63



methylation info



CXCL6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 4.06



## CXCR1 average UC-N %methylation max=-8.32% min=-12.22%



CXCR1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 4.64



## CXCR2 average UC-N %methylation max=-8.87% min=-11.98%



CXCR2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.44





CXCR5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.06



CXCR5 average UC–N %methylation max=–2.12% min=–30.77%

methylation info

CYP4F12 raw %methylation, red=UC, blue=Normal



CYP4F12 average UC–N %methylation max=10.94% min=–6.46%



RNAseq logFC(UC–N)= –1.1

## DAPP1 average UC-N %methylation max=12.85% min=-47.74%



DAPP1 raw %methylation, red=UC, blue=Normal







DEFA6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 3.75







DEFB1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.94





DMBT1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.49



## DNMBP-AS1 average UC-N %methylation max=19.78% min=1.32%



DNMBP-AS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.12



DOK3 average UC-N %methylation max=-13.04% min=-25.87%



DOK3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.77





## DTHD1 average UC-N %methylation max=0% min=-16.95%











DYRK3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.08





ELOVL5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.32





EPHX2 average UC-N %methylation max=18.84% min=-15.19%



EPHX2 raw %methylation, red=UC, blue=Normal







ESPN raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.07



ESPN average UC-N %methylation max=6.25% min=-8.81%



F2R raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.08





FABP1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.66





methylation info








FAM129C average UC-N %methylation max=9.54% min=-30.11%

methylation info







### FAM151A average UC–N %methylation max=19.37% min=–31.9%



FAM151A raw %methylation, red=UC, blue=Normal







methylation info

methylation info

#### FAM216B average UC-N %methylation max=-4.55% min=-17.97%



FAM216B raw %methylation, red=UC, blue=Normal







FAM47E raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.29

Cond



## FAM47E average UC-N %methylation max=18.17% min=-1.3%

methylation info

methylation info



FAM65B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.92







FASLG raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.13





FCER2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.07





FCER2 average UC-N %methylation max=-4.66% min=-22.88%

#### FCGR1A average UC-N %methylation max=-0.72% min=-15.35%



FCGR1A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.5





FCGR3A raw %methylation, red=UC, blue=Normal

0

200

-200

-400

RNAseq logFC(UC–N)= 2.13



1.0

0.8

0.6

0.4

0.2

0.0

-1000

-800

-600

methylation info





UC

Ν

- -1500 - 1000 - 500 0







methylation info

methylation info



FCN1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 3.25





FCRL1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.93



methylation info



FCRL3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.22



methylation info



FCRL6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.71





FCRLA raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.76













FGD2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.11



FGD2 average UC-N %methylation max=-10.89% min=-25%

methylation info



FOXP3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.11







FRAS1 raw %methylation, red=UC, blue=Normal













RNAseq logFC(UC–N)= -2.26







-200

0

-1200

-1000

-800

-600



-400



FXYD3 average UC-N %methylation max=21.33% min=-1.7%



GABRP raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 3.72







GAPT raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.22







GBA3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.98





GBP4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.74







GBP5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.22





GPR132 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.4



methylation info



GPR171 raw %methylation, red=UC, blue=Normal







GPX7 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.5





#### GREM1 average UC-N %methylation max=3.82% min=-24.59%

methylation info

GREM1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.81







GRHL3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.27



methylation info



GSTA1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.36







GUCA2A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -2.26





#### GUCA2B average UC-N %methylation max=20.4% min=-13.72%



GUCA2B raw %methylation, red=UC, blue=Normal







GZMB raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.16



# HAVCR1 average UC-N %methylation max=14.45% min=9.17%



HAVCR1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -2.28




HCAR2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 3.58





HCAR3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 4.32



#### HCLS1 average UC-N %methylation max=-31.6% min=-35.89%



HCLS1 raw %methylation, red=UC, blue=Normal







HGF raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.12







HHEX raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.05





HIST3H2BB raw %methylation, red=UC, blue=Normal

 $\mathsf{meth/Jation into} \\ \mathsf{meth/Jation into}$ 

RNAseq logFC(UC-N)= 1.17







HK3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.41





HLF average UC-N %methylation max=3.58% min=0.01%

methylation info

HLF raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.32





HMGCS2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -2.41





HOXA5 raw %methylation, red=UC, blue=Normal

9.5 0.8 9.0 0.6 8.5 methylation info log2(count) 8.0 0.4 7.5 Ń 0 0.2 7.0 **s**: ig: I 6.5 0 0 0.0 -200 -100 100 Ν UC 200 0

RNAseq logFC(UC–N)= –1.02







Т





HOXA6 raw %methylation, red=UC, blue=Normal







HOXA-AS3 average UC-N %methylation max=30.2% min=-3.83%

methylation info







# HSD17B2 average UC-N %methylation max=36.11% min=-18.56%



# HSD17B2 raw %methylation, red=UC, blue=Normal

## RNAseq logFC(UC-N)= -2.11











-200

0

## ICOS average UC–N %methylation max=–2.12% min=–21.02%



-1000

methylation info



-400

-600

-800





#### IFNG-AS1 average UC-N %methylation max=-10.24% min=-27.72%

methylation info



IFNG-AS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.19

![](_page_160_Figure_4.jpeg)

methylation info

![](_page_161_Figure_1.jpeg)

## IFNG raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.54

![](_page_161_Figure_4.jpeg)

![](_page_162_Figure_0.jpeg)

methylation info

IGFBP5 raw %methylation, red=UC, blue=Normal

13.0 0.6 12.5 12.0 methylation info log2(count) 0.4 11.5 11.0 0.2 ::: 10.5 0.0 11554 10.0 Т -800 -400 -200 -600 0

RNAseq logFC(UC–N)= 1.52

![](_page_162_Figure_6.jpeg)

![](_page_163_Figure_0.jpeg)

![](_page_163_Figure_1.jpeg)

IGFLR1 raw %methylation, red=UC, blue=Normal

![](_page_163_Figure_3.jpeg)

![](_page_163_Figure_4.jpeg)

![](_page_164_Figure_0.jpeg)

![](_page_164_Figure_2.jpeg)

IKZF3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.6

![](_page_164_Figure_5.jpeg)

![](_page_165_Figure_1.jpeg)

IL12RB2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.04

![](_page_165_Figure_4.jpeg)

![](_page_166_Figure_0.jpeg)

![](_page_166_Figure_1.jpeg)

IL17A raw %methylation, red=UC, blue=Normal

IL17A average UC-N %methylation max=-1.6% min=-21.64%

RNAseq logFC(UC–N)= 5.03

![](_page_166_Figure_4.jpeg)

![](_page_167_Figure_0.jpeg)

IL1B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.28

![](_page_167_Figure_3.jpeg)

methylation info

![](_page_168_Figure_1.jpeg)

IL2RA raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.45

![](_page_168_Figure_4.jpeg)

![](_page_168_Figure_5.jpeg)

![](_page_169_Figure_0.jpeg)

INPP5D raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.07

![](_page_169_Figure_3.jpeg)

## INPP5D average UC-N %methylation max=0.43% min=-37.9%

#### INPP5J average UC-N %methylation max=17.93% min=17.54%

![](_page_170_Figure_1.jpeg)

INPP5J raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.43

![](_page_170_Figure_4.jpeg)

![](_page_171_Figure_0.jpeg)

IRAK3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.07

![](_page_171_Figure_3.jpeg)

![](_page_172_Figure_1.jpeg)

RNAseq logFC(UC-N)= 1.49

![](_page_172_Figure_3.jpeg)

![](_page_173_Figure_0.jpeg)

![](_page_173_Figure_2.jpeg)

![](_page_173_Figure_3.jpeg)

![](_page_173_Figure_4.jpeg)

![](_page_173_Figure_5.jpeg)

![](_page_174_Figure_1.jpeg)

ITGAX raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.13

%methlation UC-N

![](_page_174_Figure_4.jpeg)

ITGAX average UC-N %methylation max=-1.11% min=-22.43%

:

![](_page_175_Figure_0.jpeg)

ITGB2–AS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.79

![](_page_175_Figure_3.jpeg)

methylation info

![](_page_176_Figure_1.jpeg)

ITGB2 raw %methylation, red=UC, blue=Normal

![](_page_176_Figure_3.jpeg)

![](_page_176_Figure_4.jpeg)

-600 -400 -200 200 0 ITPRIPL1 raw %methylation, red=UC, blue=Normal RNAseq logFC(UC-N)= 1.17 7.0 0.6 0.5 6.5 0.4 6.0 methylation info log2(count) 0.3 00 5.5 0.2 5.0 0.1 0.0 4.5 Т -600 -400 -200 200 Ν UC 0

enhancer site

![](_page_177_Figure_2.jpeg)

![](_page_177_Figure_3.jpeg)

![](_page_178_Figure_1.jpeg)

IYD raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.02

![](_page_178_Figure_4.jpeg)

![](_page_179_Figure_0.jpeg)

JAK3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.29

![](_page_179_Figure_4.jpeg)




KLHL14 raw %methylation, red=UC, blue=Normal









KLHL5 raw %methylation, red=UC, blue=Normal







KLHL6 raw %methylation, red=UC, blue=Normal











RNAseq logFC(UC-N)= 1.89











LAX1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.88



LAX1 average UC-N %methylation max=-2.97% min=-32.28%

LCK average UC-N %methylation max=-18.98% min=-40.19%



LCK raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.42





LCN2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 4.95



LCN2 average UC-N %methylation max=11.49% min=-33.68%



LCP2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.06





LDHD raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.11





LEF1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.16





LIMD2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.67



LINC00483 raw %methylation, red=UC, blue=Normal







RNAseq logFC(UC-N)= -1.07



methylation info



LINC00861 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.62



# LINC00926 average UC-N %methylation max=-12.89% min=-37.59%



LINC00926 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.36



methylation info





LMO2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.03







LRP1B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.19







LTF raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.42



LTF average UC-N %methylation max=-13.45% min=-19.28%



LYPD5 average UC-N %methylation max=2.06% min=-16.88%



LYPD5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.07





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:

0



-500

-1000



.















MB21D1 average UC-N %methylation max=1.26% min=-27.18%



RNAseq logFC(UC-N)= 1.11







MEFV raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.77



## MEOX1 average UC-N %methylation max=-12.72% min=-20.63%



MEOX1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.9



## MEP1A average UC-N %methylation max=40.48% min=-6.11%



MEP1A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -2.15

















MIR155HG raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.56







MME raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.09





MOCS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.27



## MS4A1 average UC-N %methylation max=-17.51% min=-20.03%



MS4A1 raw %methylation, red=UC, blue=Normal

0.9 0.8 ġ 0.7 0.6 0.5 0.4 Т Т Т Т 20 120 40 60 80 100 140

RNAseq logFC(UC–N)= 2.12



methylation info

## MS4A8 average UC-N %methylation max=21.79% min=-24.28%





RNAseq logFC(UC-N)= -1.18











MYO1G raw %methylation, red=UC, blue=Normal

1.0 9.5 0.8 9.0 methylation info 0.6 8.5 log2(count) 8.0 0.4 7.5 0.2 7.0 0.0 Т 200 Ν UC -50 0 50 100 150

RNAseq logFC(UC-N)= 1.31





MZB1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.5



## NCKAP5 average UC-N %methylation max=24.32% min=-0.84%



NCKAP5 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.21







RNAseq logFC(UC-N)= 1.05




## NKG7 average UC-N %methylation max=-17.07% min=-20.01%













NLRC3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.15







NLRC5 average UC-N %methylation max=0.14% min=-20.95%



NLRP1 average UC-N %methylation max=-3.13% min=-56.51%



NLRP1 raw %methylation, red=UC, blue=Normal









NWD1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.16







NXPE2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.04





NXPE3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.12



OAS2 average UC–N %methylation max=–0.39% min=–27.15%



OAS2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.43



## OLFM4 average UC-N %methylation max=-8.74% min=-18.33%



OLFM4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.49







OSM average UC-N %methylation max=-33.05% min=-36.44%



OSM raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.1





OSMR raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.1







OTC raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.68





PAPLN raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.08





PARP15 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.59





-500

0



methylation info

-2000

-1500

-1000

Cond

UC

Ν







methylation info

Т

-800

-1000

Т

-600

-400

-200

0

200

PCED1B average UC-N %methylation max=-31.56% min=-40.61%

Cond

Ν

Т

UC



PCK1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= -2.18





PCSK1 average UC-N %methylation max=3.24% min=-12.76%

methylation info

PCSK1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.97





PDPN raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.35





methylation info







RNAseq logFC(UC–N)= 1.17





PI3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 4.11





PIK3CD raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.35



methylation info







RNAseq logFC(UC–N)= 1.36





PLA1A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.28



## PLA1A average UC-N %methylation max=11.57% min=-15.33%



PLCE1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.02

Cond



methylation info





methylation info







● %methlation UC-N

cpg site

e dnase1 site

enhancer site



PLEK raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.69





methylation info



PNLIPRP2 raw %methylation, red=UC, blue=Normal







methylation info



RNAseq logFC(UC–N)= 1.41





0



methylation info

-1500

-1000



-500

Cond

enhancer site





PRF1 raw %methylation, red=UC, blue=Normal



RNAseq logFC(UC-N)= 1.68







PRLR raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.06



NASEQ IOGFC(UC-N)= -

## PSME2 average UC–N %methylation max=–0.03% min=–15.61%



PSME2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.17





200

0



-200

-400

-600



PSTPIP1 average UC–N %methylation max=–2.94% min=–41.71%

-1200

-1000

-800



PTPN7 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.62




PYHIN1 raw %methylation, red=UC, blue=Normal

methylation info

RNAseq logFC(UC-N)= 1.24

Т

UC







RNAseq logFC(UC-N)= -1.05







REC8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.33







REG1B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.73







RGCC raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.15





RMDN2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.23



### RMDN2 average UC-N %methylation max=18.65% min=-0.55%



RNASE1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.06



### RNASE1 average UC-N %methylation max=15.41% min=4.04%





RNF128 raw %methylation, red=UC, blue=Normal

methylation info







ROBO1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.04





%methlation UC-N

cpg site

e dnase1 site

# RTEL1 average UC-N %methylation max=-8.1% min=-19.77%



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RUNX3 raw %methylation, red=UC, blue=Normal

10.0 1.0 9.5 0.8 9.0 methylation info log2(count) 0.6 8 8.5 0 0.4 8.0 0.2 7.5 0.0 -150 -100 -50 50 100 Ν UC 0

## RNAseq logFC(UC–N)= 1.35



S100A9 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.46





S1PR3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.39





S1PR4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.76



S1PR4 average UC-N %methylation max=-4.21% min=-44.27%



SAA1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 6.4





SAA2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 6.23



SAA2 average UC-N %methylation max=-5.52% min=-20.55%

SASH3 average UC–N %methylation max=–15.36% min=–31.02%



SASH3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.4





SCIMP raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.07



### SELENBP1 average UC-N %methylation max=28.26% min=9.49%



SELENBP1 raw %methylation, red=UC, blue=Normal









SEMA5A raw %methylation, red=UC, blue=Normal









SEMA7A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.04







SEPT1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.21



methylation info



SH2B2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.46





SH2D2A average UC-N %methylation max=5.85% min=-34.77%

SH2D2A raw %methylation, red=UC, blue=Normal





methylation info



SH2D3C raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.32





SIRPB1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.91



Cond



SIRPB2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.12





0

20

40



SLAMF1 raw %methylation, red=UC, blue=Normal

-20

SLAMF1 average UC-N %methylation max=0% min=-36.55%



RNAseq logFC(UC–N)= 1.34



-80

-60

-40

#### SLAMF6 average UC-N %methylation max=-9.36% min=-13.01%



SLAMF6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.72



#### SLAMF7 average UC–N %methylation max=14.44% min=–35.88%



SLAMF7 raw %methylation, red=UC, blue=Normal





methylation info



SLC11A1 average UC-N %methylation max=-24.14% min=-30.06%



SLC11A1 raw %methylation, red=UC, blue=Normal







#### SLC17A8 average UC-N %methylation max=11.95% min=-14.42%

methylation info

SLC17A8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.6





SLC1A3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.07





SLC22A4 raw %methylation, red=UC, blue=Normal







methylation info



SLC25A34 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.76





methylation info

SLC26A4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 3.28


# SLC30A10 average UC-N %methylation max=24.33% min=-0.03%

methylation info



SLC30A10 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.89





SLC39A2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.4



methylation info

## SLC3A1 average UC-N %methylation max=27.42% min=13.68%



SLC3A1 raw %methylation, red=UC, blue=Normal









SLC51B raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.28





SLC6A14 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 5.66



## SLC6A14 average UC-N %methylation max=18.13% min=-42.97%

methylation info





RNAseq logFC(UC–N)= -2.82





100





methylation info



SLC9C1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.2





SNX20 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.61







SORCS2 raw %methylation, red=UC, blue=Normal





#### SP140 average UC-N %methylation max=-9.39% min=-29.98%

methylation info



SP140 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.67



methylation info



SPOCK2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.57







SRGN raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.17







STAP1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.23





100

200



-200

-100

STOM raw %methylation, red=UC, blue=Normal

0

RNAseq logFC(UC–N)= 1.25

enhancer site





-200

0

# STS average UC–N %methylation max=–3.54% min=–9.53%

methylation info

methylation info

-600

-400

Cond

Ν

Т

UC

## SUCLG2-AS1 average UC-N %methylation max=6.95% min=-1.26%



SUCLG2–AS1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.02









SULT1A2 raw %methylation, red=UC, blue=Normal





methylation info





0



-100

-200





100

200

-400

-300

methylation info



TBC1D10C raw %methylation, red=UC, blue=Normal







methylation info

TBX21 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.6







RNAseq logFC(UC-N)= 2





methylation info



TCN1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.96





-400





-200



methylation info

-800

-600

Cond

Ν

Т

UC



TGIF2 average UC-N %methylation max=12.02% min=-39.01%



TGIF2 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.01







TG raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.92















TIMP4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= –1.06







-100

0

TINCR raw %methylation, red=UC, blue=Normal



-200



e dnase1 site

enhancer site



100



TLR8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.04



TLR8 average UC-N %methylation max=-7.25% min=-16.18%

methylation info



TM4SF20 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.13





TMC6 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.1





TMC8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.55





TMEM173 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.21



methylation info







TMEM37 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.02



TMEM72 average UC-N %methylation max=18.99% min=-22.42%



TMEM72 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.5










# TMIGD1 average UC-N %methylation max=21.43% min=-3.15%













TNFRSF10C raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.71





TNFRSF4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.74



TNFRSF4 average UC-N %methylation max=-0.15% min=-16.13%



TNFRSF8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.57



#### TNFRSF9 average UC-N %methylation max=-15.47% min=-26.35%



TNFRSF9 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 2.92







TNFSF14 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.69



methylation info



TNFSF8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.02







TP63 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.25



### TRAF3IP3 average UC-N %methylation max=-5.4% min=-37.43%



TRAF3IP3 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.22





TRIM22 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.45





100

200



-200



0

-100

RNAseq logFC(UC-N)= -1.18



#### UBASH3A average UC-N %methylation max=26.4% min=-20.82%



UBASH3A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.06





UCP2 raw %methylation, red=UC, blue=Normal

methylation info















UGT1A8 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1.85



UGT1A8 average UC-N %methylation max=26.79% min=-38.1%







RNAseq logFC(UC-N)= 1.01





VNN1 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.54





VWA1 raw %methylation, red=UC, blue=Normal

1.0 0.8 0.6 methylation info 0.4 0.2 0.0 Т -800 -700 -500 -300 -200 -600 -400

RNAseq logFC(UC–N)= 1.02



methylation info

#### WDFY4 average UC-N %methylation max=-14.38% min=-40.51%



WDFY4 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.45





XKR9 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC–N)= 1.45





ZAP70 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 1.49



ZAP70 average UC-N %methylation max=2.75% min=-28.16%



## ZC3H12A average UC-N %methylation max=-1.3% min=-41.73%

ZC3H12A raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= 2.19





ZNF704 raw %methylation, red=UC, blue=Normal

RNAseq logFC(UC-N)= -1

