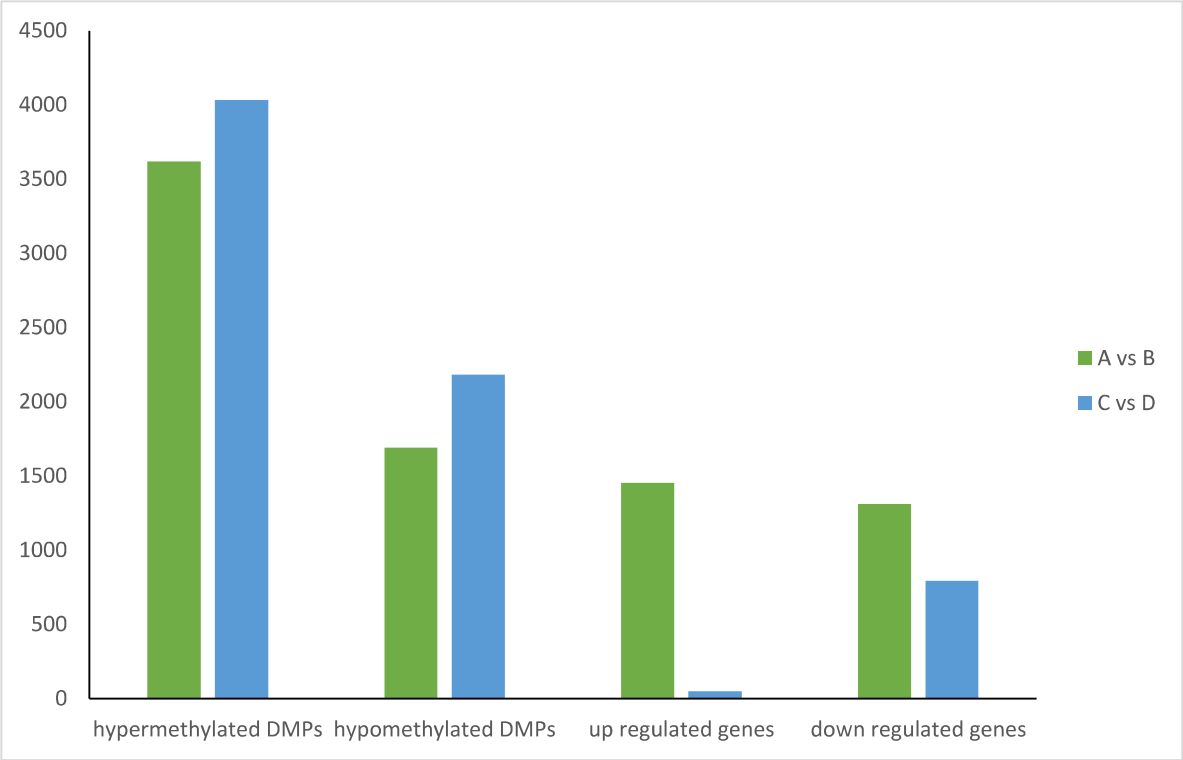
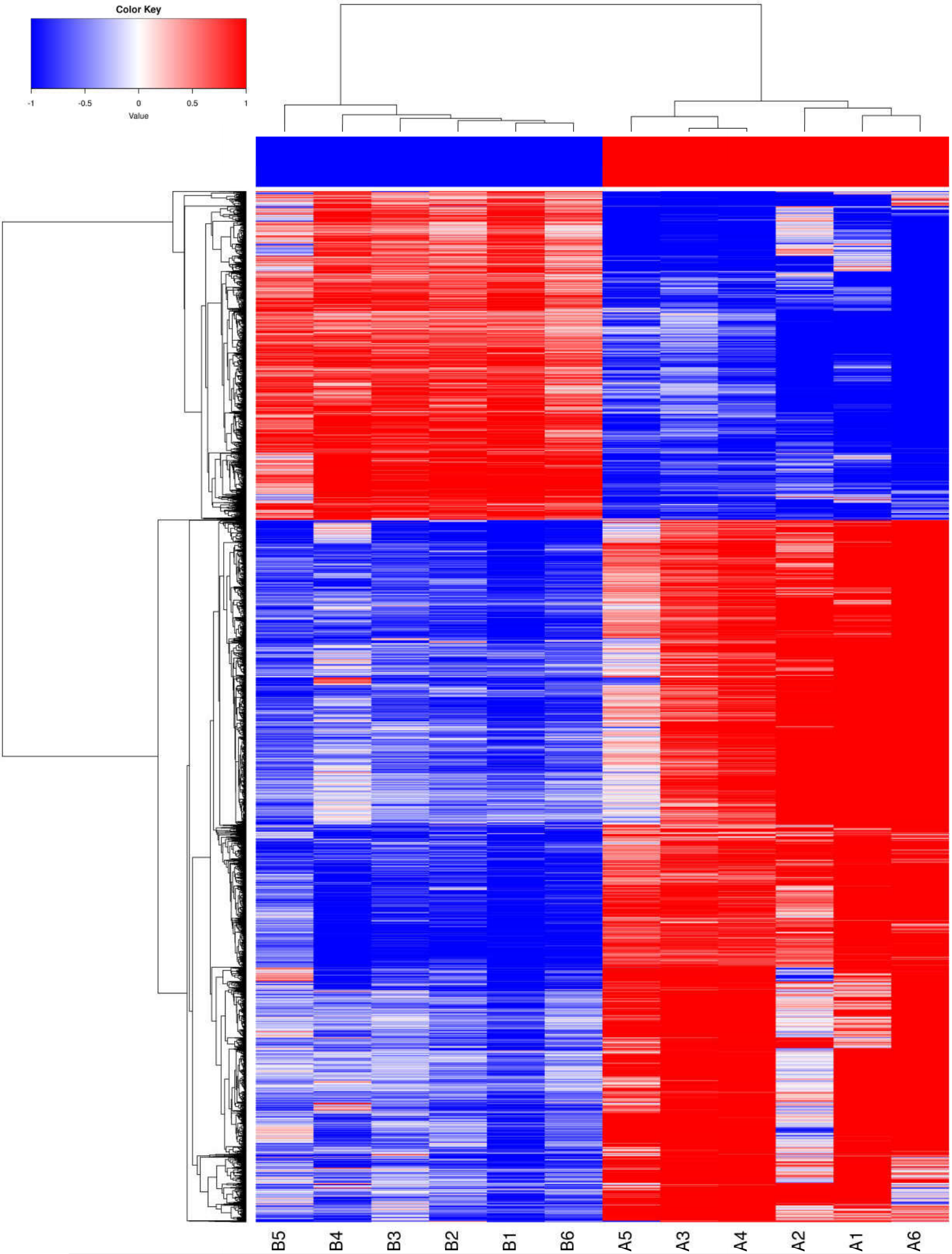
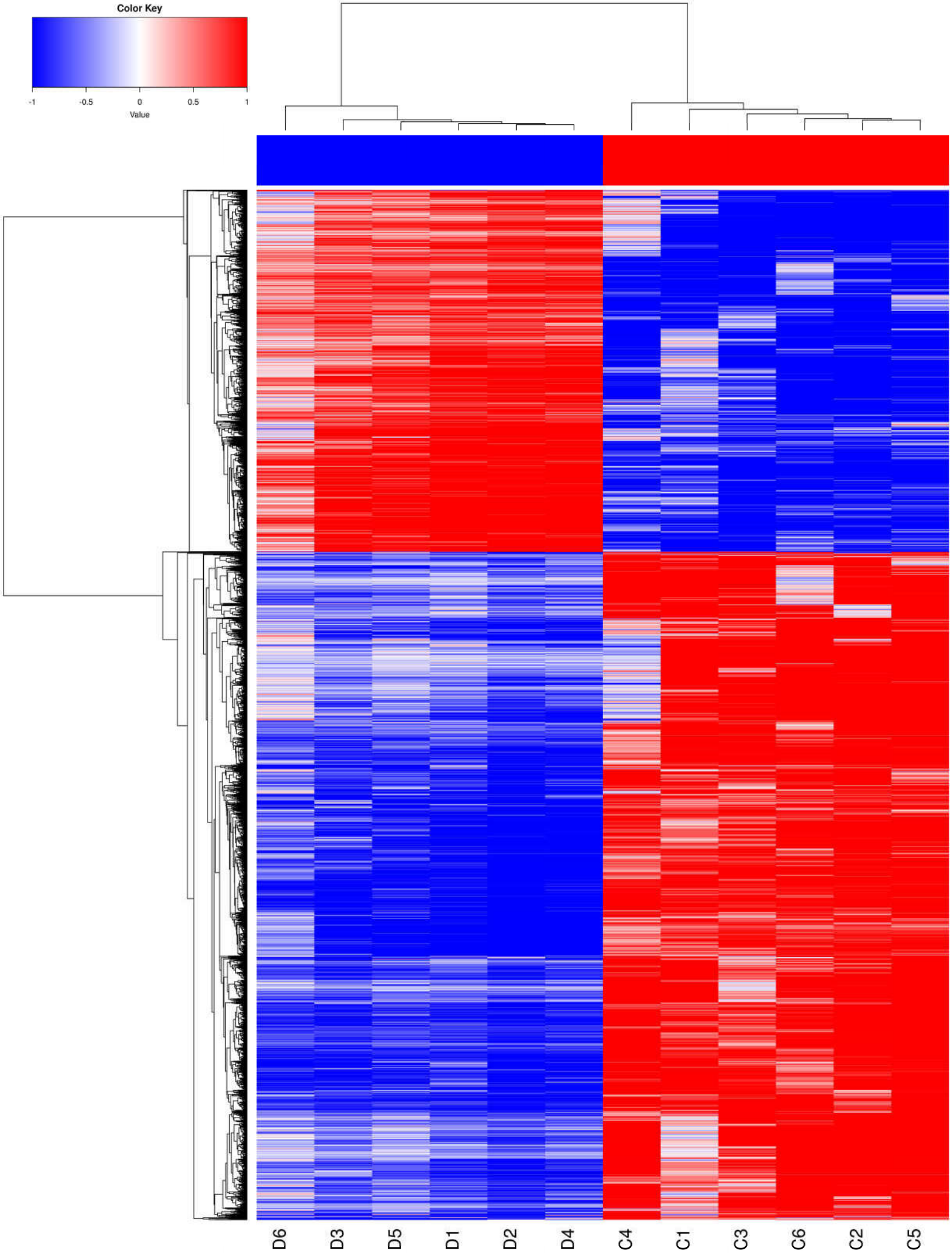


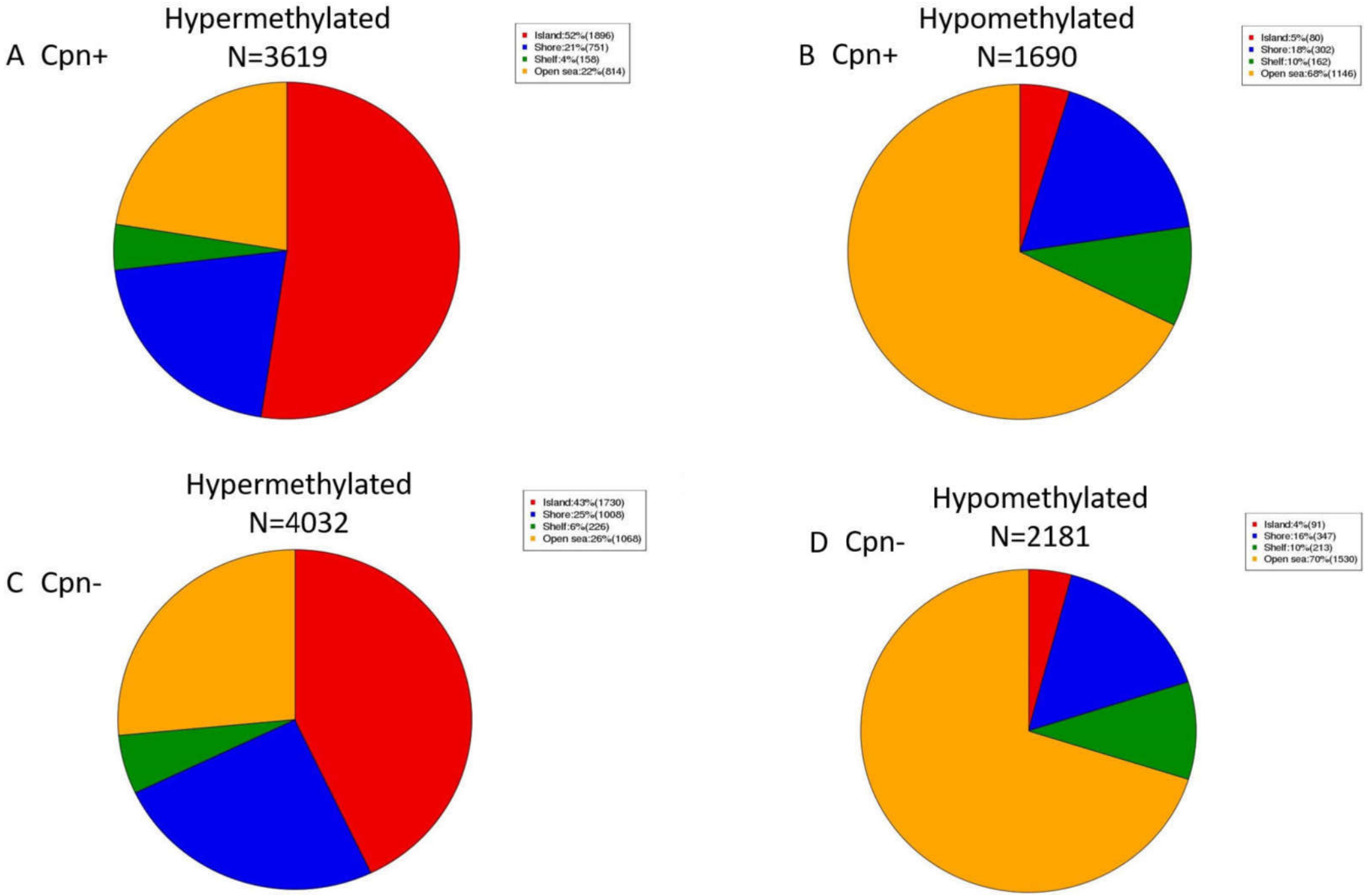
Supplement Figure.1 The chart for total transcript up and down and for the DNA methylation status.



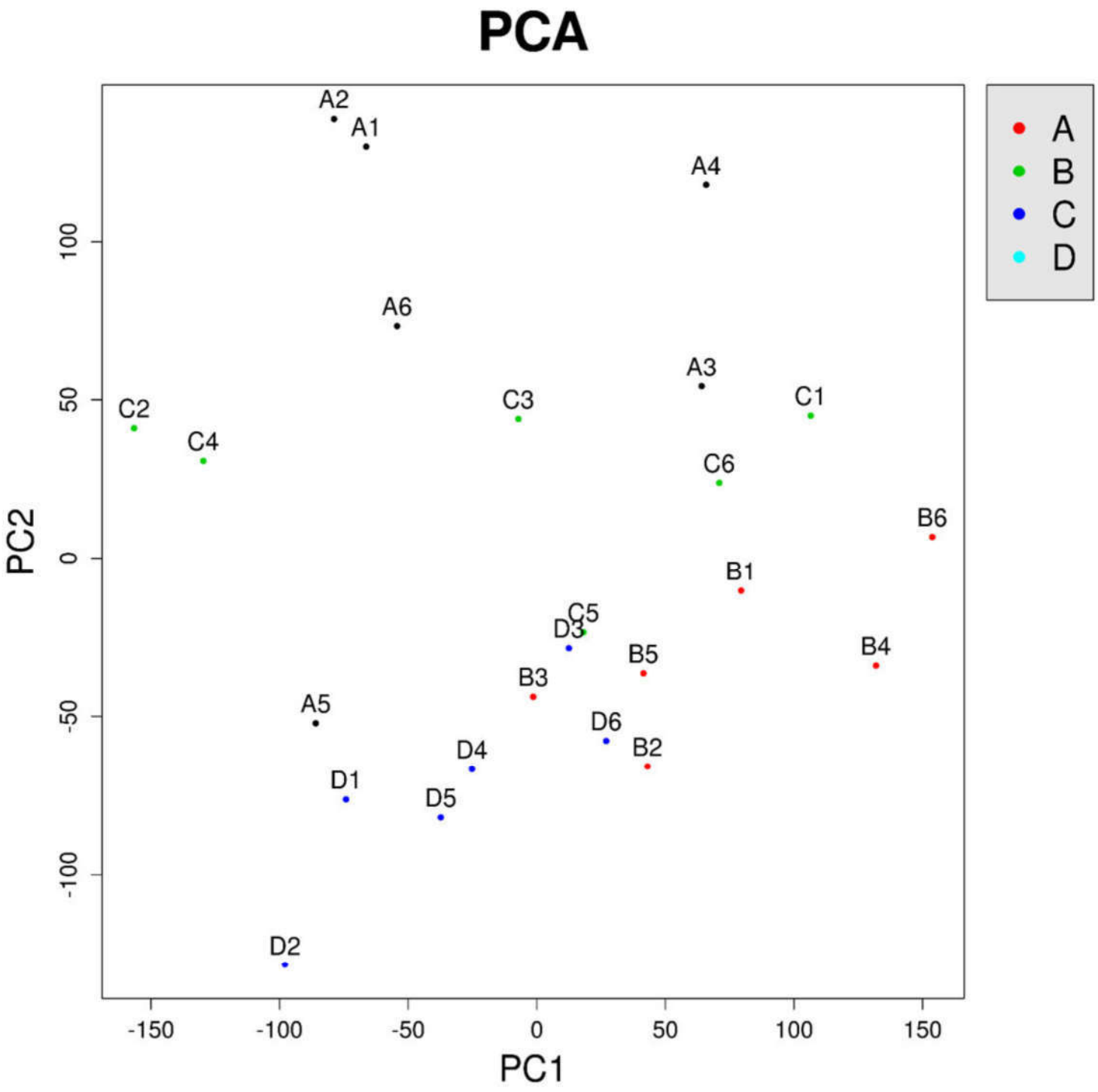
Supplement Figure.2 Heatmaps of differentially methylation positions (DMPs) in both the comparisions. Heatmaps of DMPs for Cpn positive NSCLC vs. Cpn positive adjacent normal (A vs B). "Red" indicates relative hypermethylation, and "Blue" indicates relative hypomethylation.



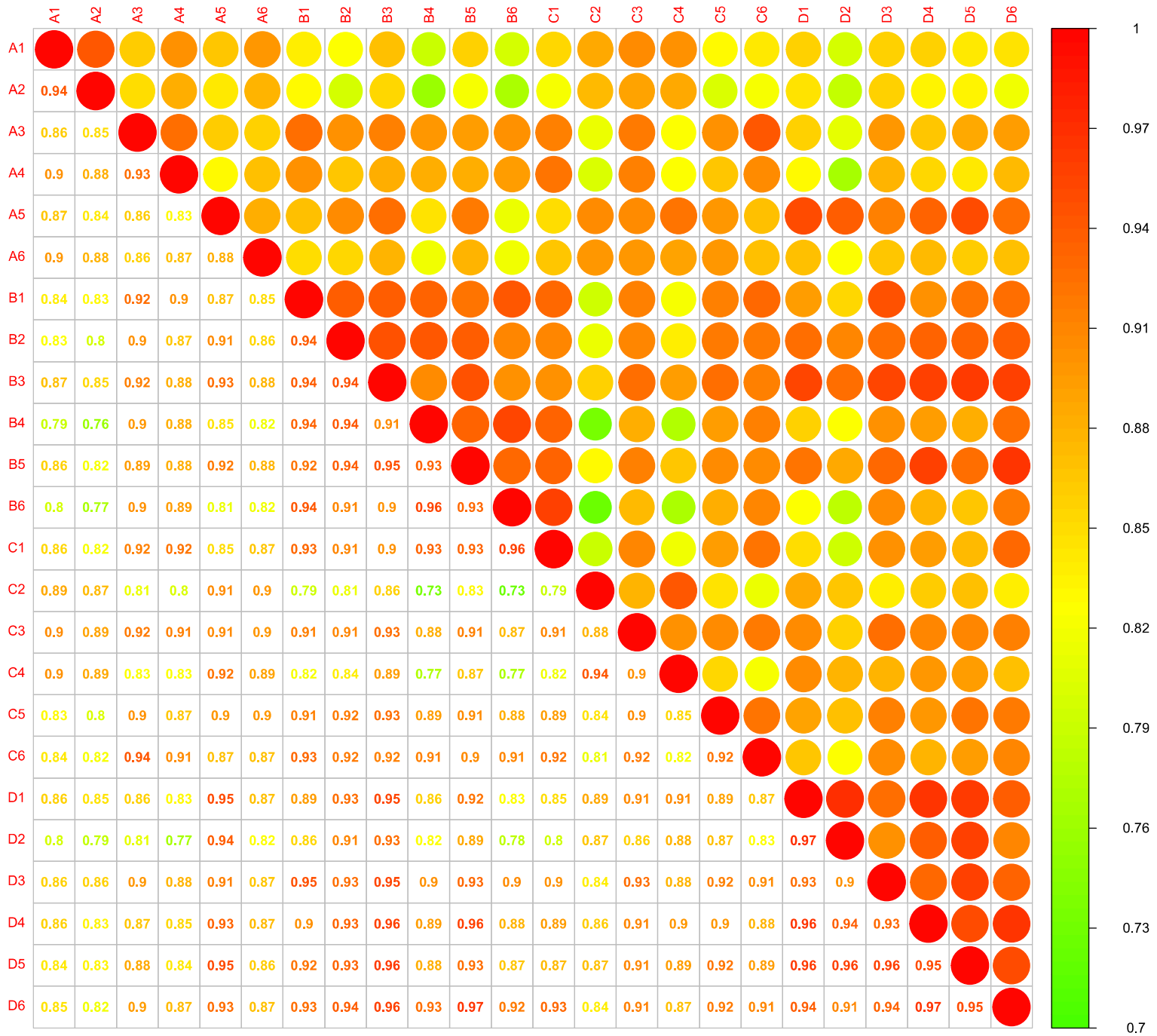
Supplement Figure.3 Heatmaps of differentially methylation positions (DMPs) in both the comparisions. Cpn negative NSCLC vs. Cpn negative adjacent normal (C vs D) were hierarchically clustered. "Red" indicates relative hypermethylation, and "Blue" indicates relative hypomethylation.



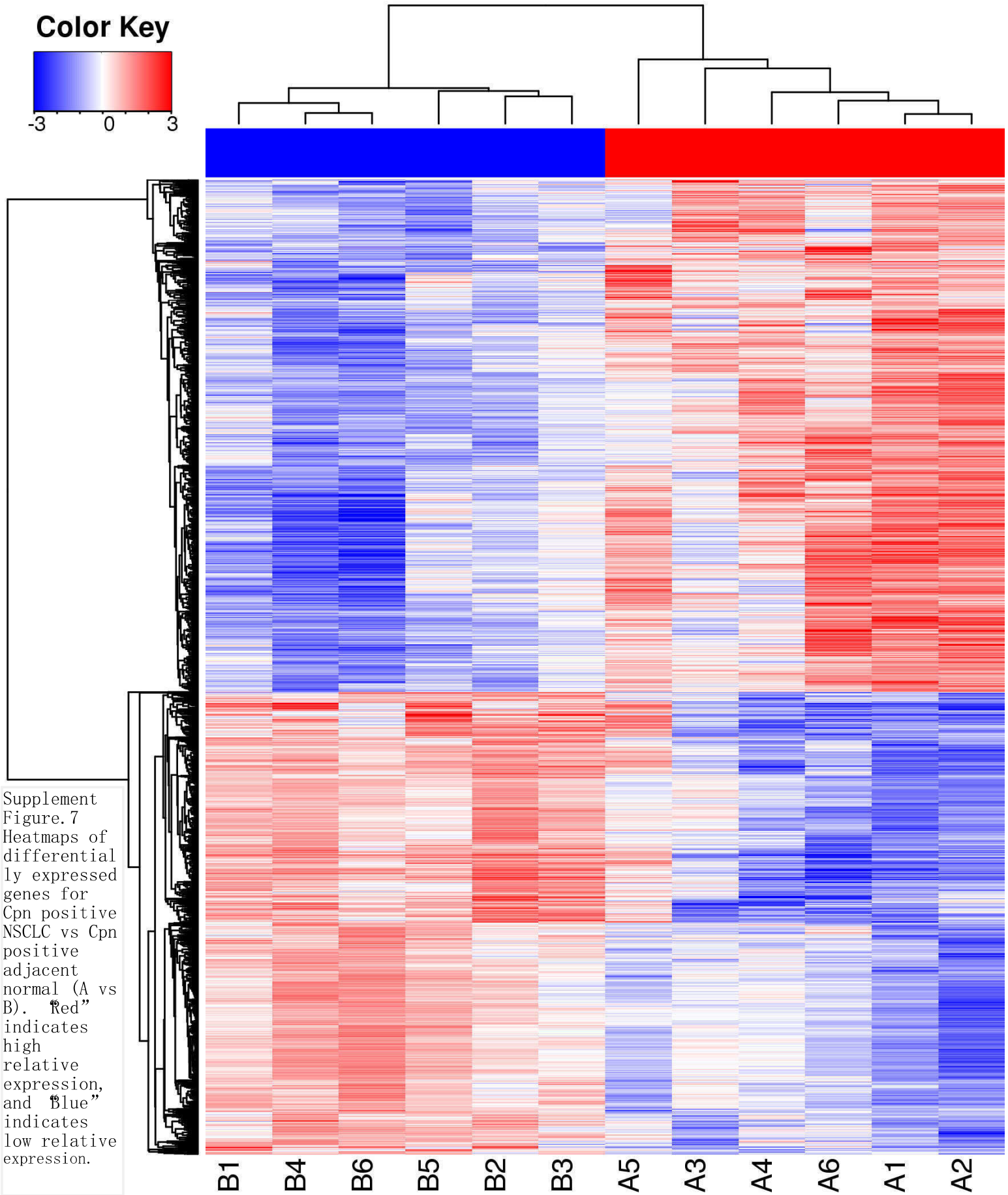
Supplement Figure.4 Distribution of DMPs according region in relation to CpG islands (CGI, shore and shelf (flanking CGIs,2-4 kb from CGIs), open sea (non-related to CGIs)). (A, B) Differentially hypermethylated and hypomethylated probes of A vs B. (C, D) Differentially hypermethylated and hypomethylated probes of C vs D.



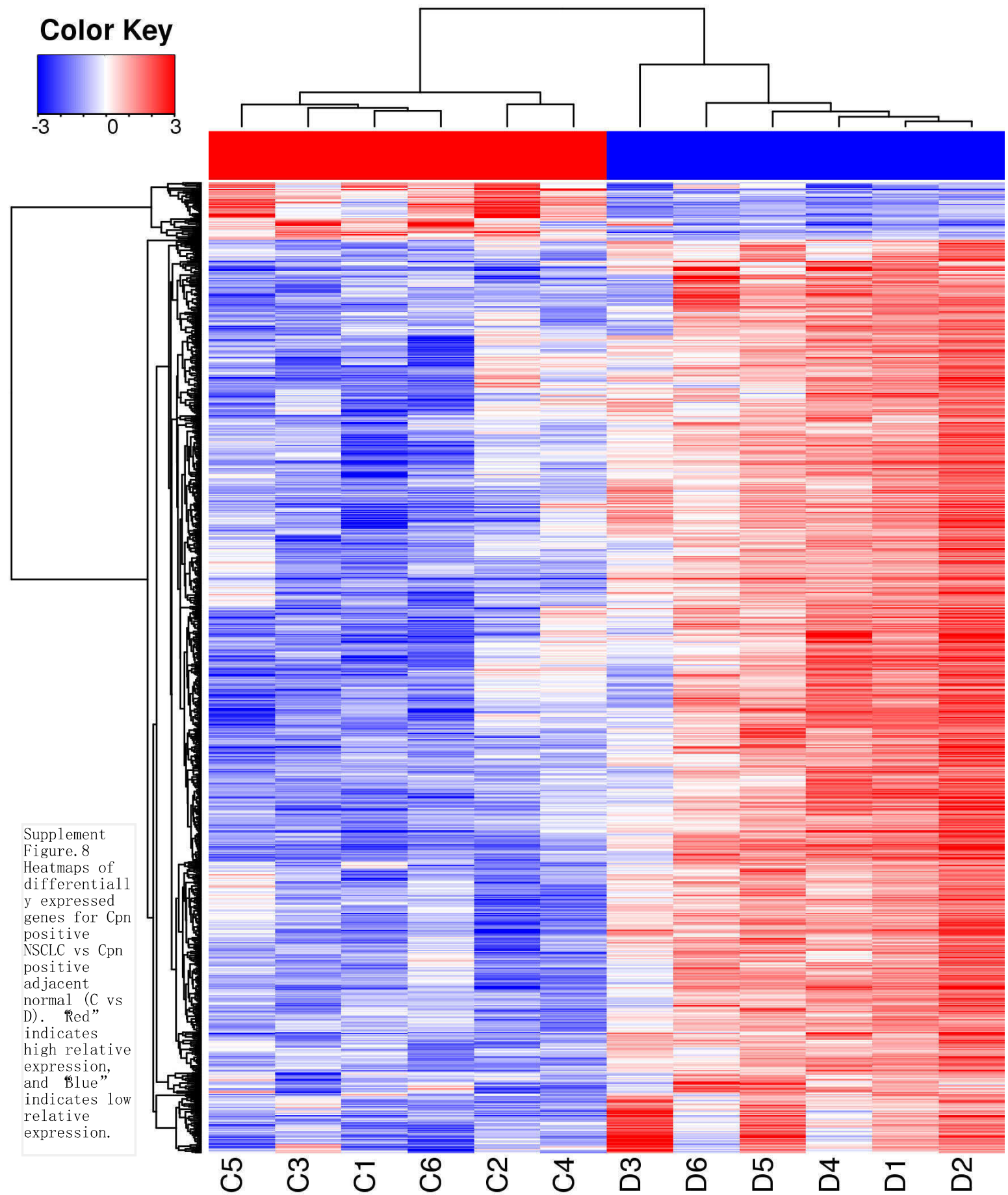
Supplement Figure.5 Principal component analysis (PCA) plots of human gene expression data (x-axis: 35.87%, and y-axis: 21.76%).



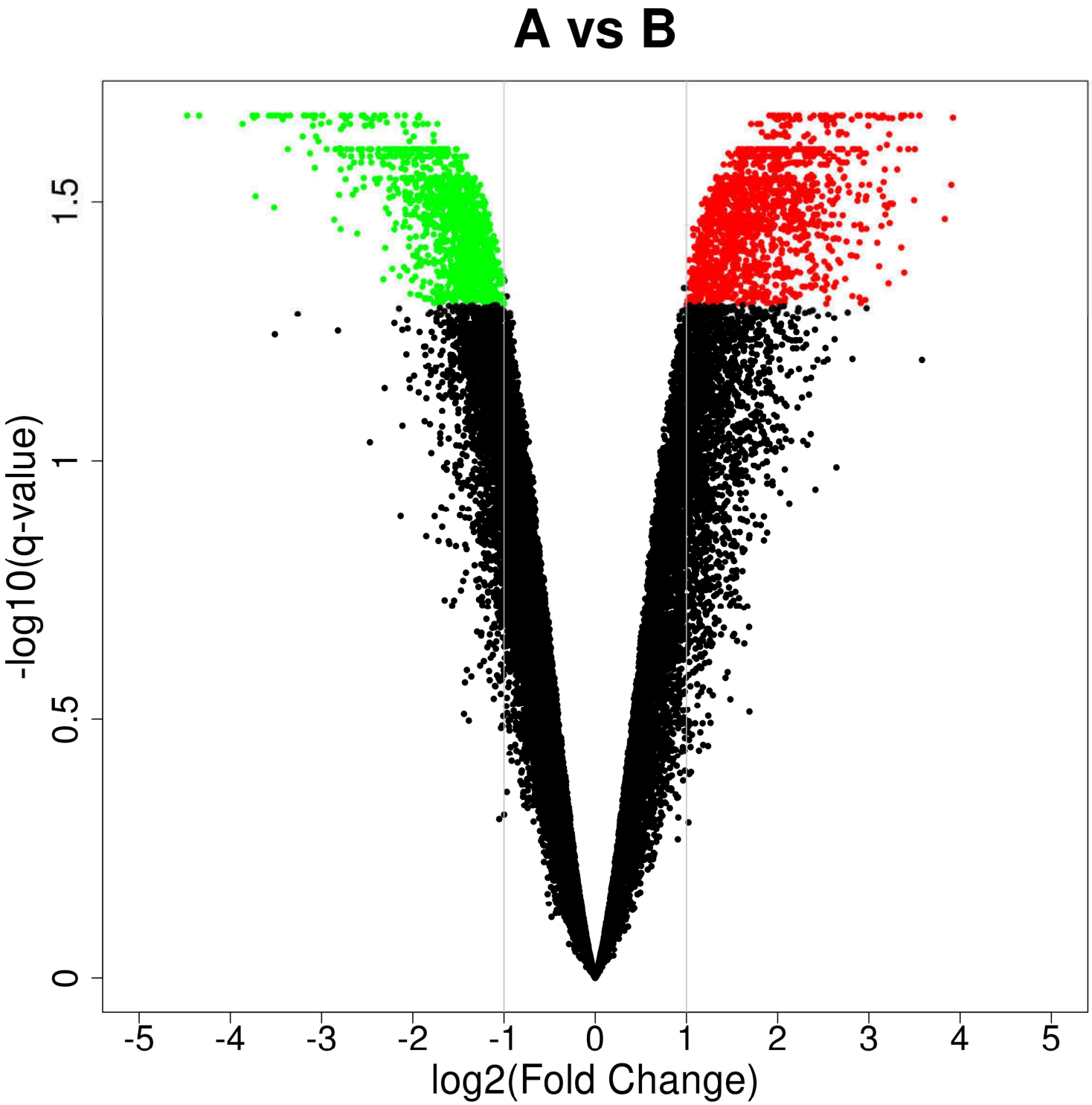
Supplement Figure.6 The relationship between gene expression profiles of all lung cancer tissues.



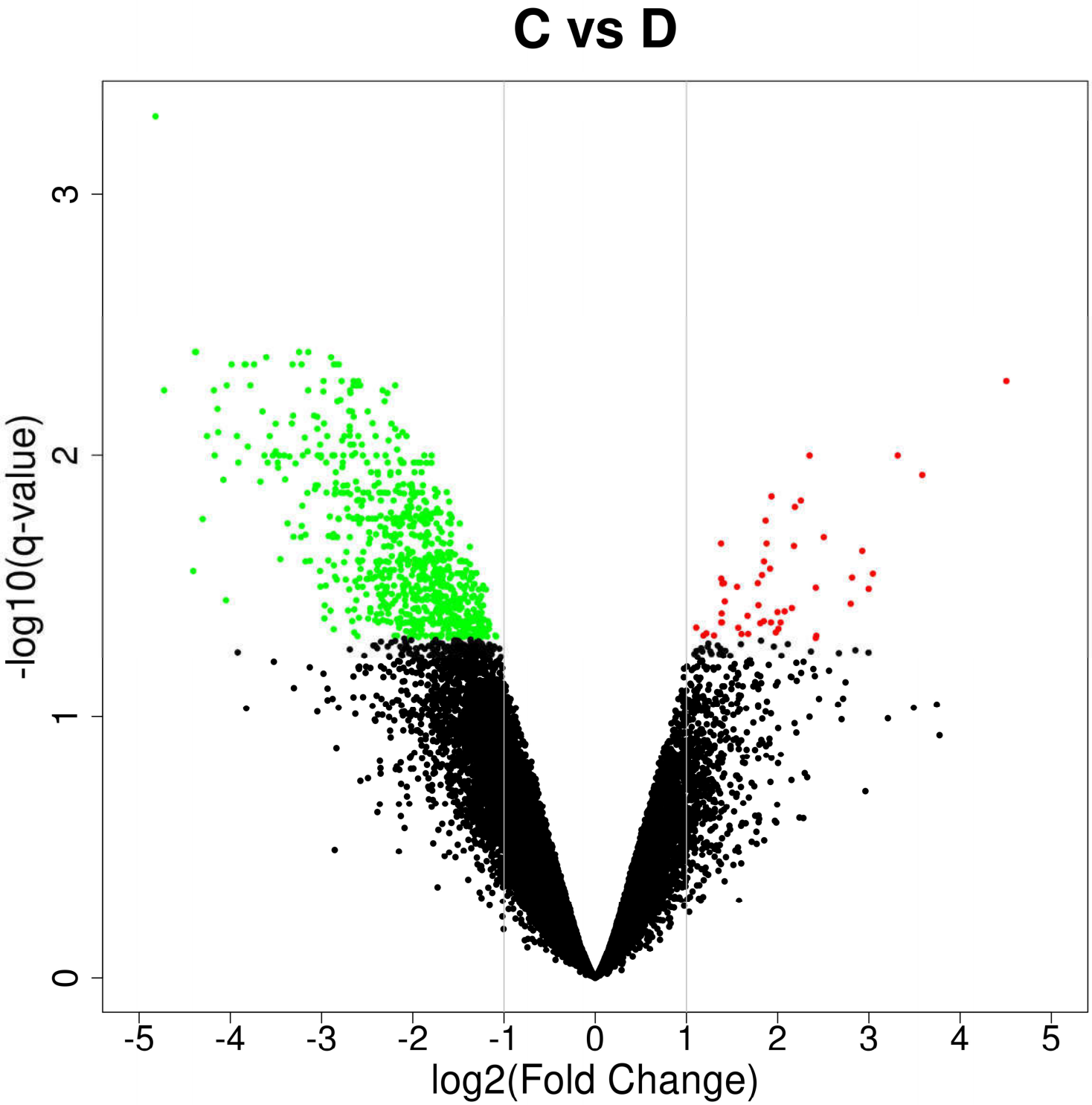
Supplement Figure.7 Heatmaps of differentially expressed genes for Cpn positive NSCLC vs Cpn positive adjacent normal (A vs B). "Red" indicates high relative expression, and "Blue" indicates low relative expression.



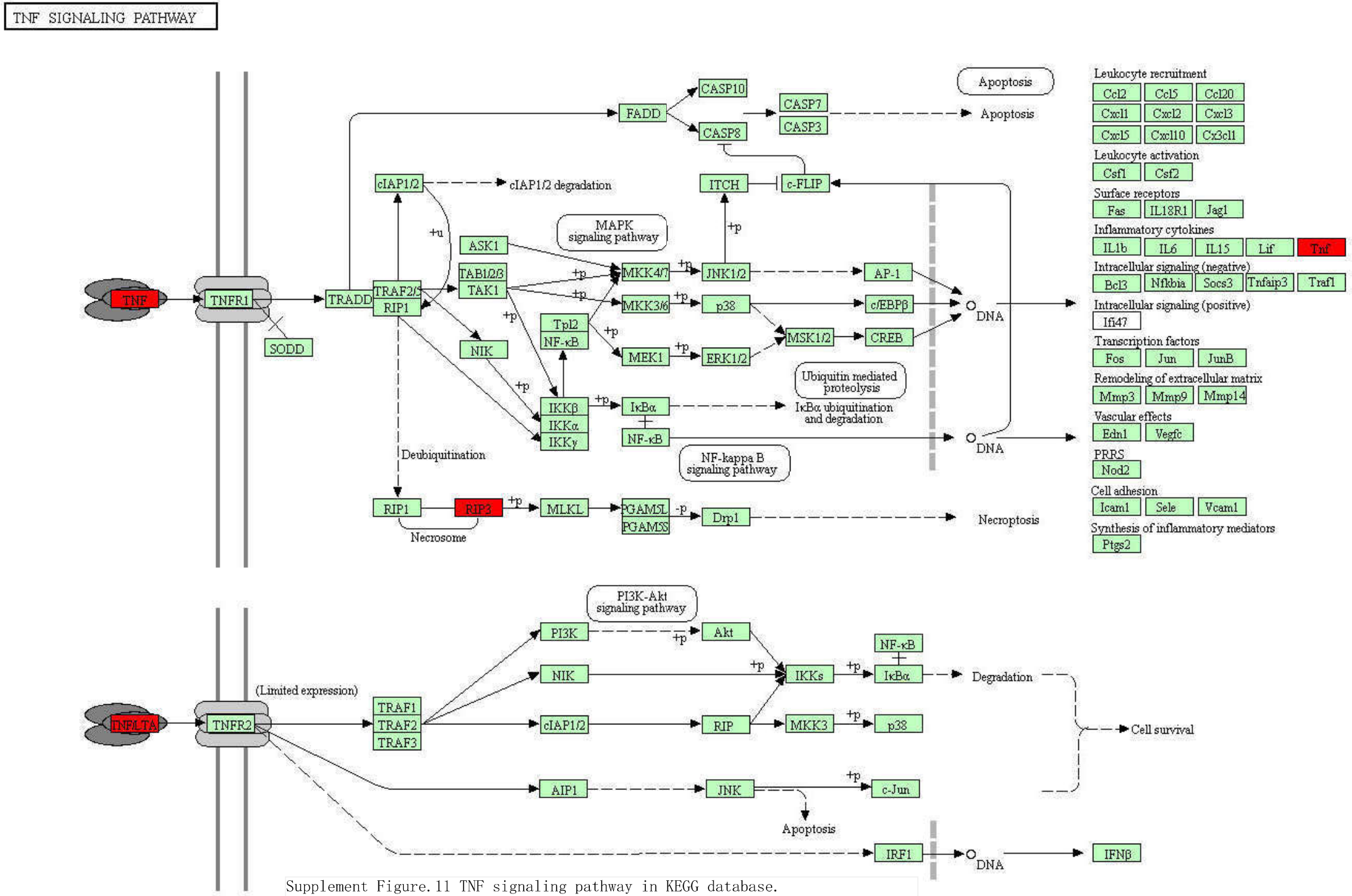
Supplement Figure.8 Heatmaps of differentially expressed genes for Cpn positive NSCLC vs Cpn positive adjacent normal (C vs D). "Red" indicates high relative expression, and "Blue" indicates low relative expression.



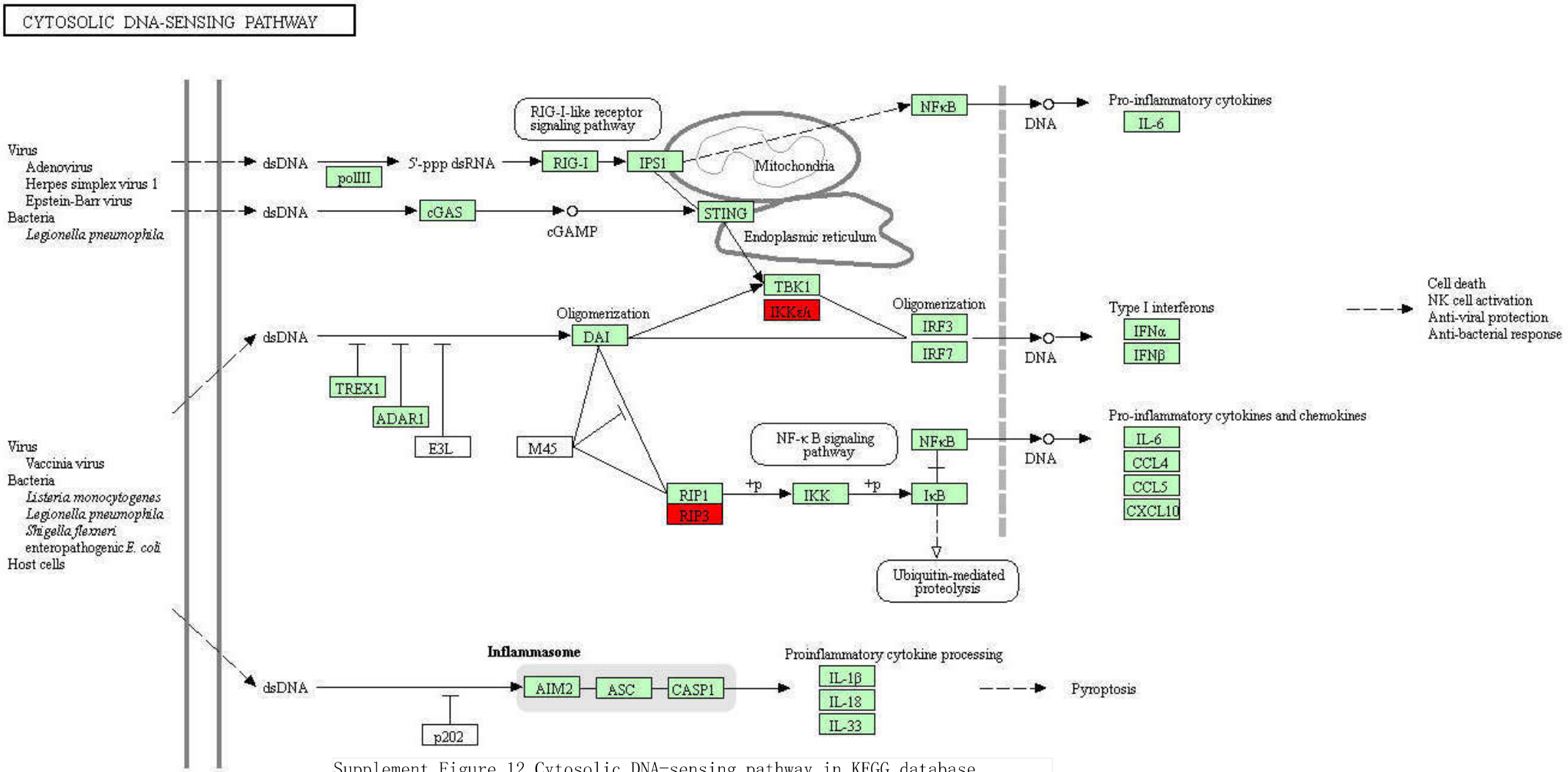
Supplement Figure.9 Volcano plots of gene expression differences in A vs B.



Supplement Figure.10 Volcano plots of gene expression differences in C vs D.



Supplement Figure.11 TNF signaling pathway in KEGG database.



Supplement Figure.12 Cytosolic DNA-sensing pathway in KEGG database.

Supplement Figure.13 The Heat map and gene list correlation profile in the dataset for the comparison of A vs B by GSEA.

SampleName		
TUBB3	TUBB3	tubulin, beta 3
SPP1	SPP1	secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1)
NKX2-4	NKX2-4	NK2 transcription factor related, locus 4 (Drosophila)
UBE2U	UBE2U	ubiquitin-conjugating enzyme E2U (putative)
MND1	MND1	meiotic nuclear divisions 1 homolog (S. cerevisiae)
ARNTL2	ARNTL2	aryl hydrocarbon receptor nuclear translocator-like 2
HCN1	HCN1	hyperpolarization activated cyclic nucleotide-gated potassium channel 1
ANLN	ANLN	anillin, actin binding protein
OR11H6	OR11H6	olfactory receptor, family 11, subfamily H, member 6
SCG5	SCG5	secretogranin V (7B2 protein)
FAP	FAP	fibroblast activation protein, alpha
KIF14	KIF14	kinesin family member 14
LOC100131654		
PITX1	PITX1	paired-like homeodomain transcription factor 1
COL1A1	COL1A1	collagen, type I, alpha 1
TTK	TTK	TTK protein kinase
TIFAB	TIFAB	-
FAM83B	FAM83B	family with sequence similarity 83, member B
MELK	MELK	maternal embryonic leucine zipper kinase
FGF11	FGF11	fibroblast growth factor 11
DDX53	DDX53	DEAD (Asp-Glu-Ala-Asp) box polypeptide 53
CILP	CILP	cartilage intermediate layer protein, nucleotide pyrophosphohydrolase
TCN1	TCN1	transcobalamin I (vitamin B12 binding protein, R binder family)
CEP55	CEP55	centrosomal protein 55kDa
LHX5	LHX5	LIM homeobox 5
ZNF404	ZNF404	zinc finger protein 404
TRIM59	TRIM59	tripartite motif-containing 59
KIF20A	KIF20A	kinesin family member 20A
LINC01521		
LOC283028	LOC283028	-
MEX3A		
BUB1	BUB1	BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast)
CLSPN	CLSPN	claspin homolog (Xenopus laevis)
SGOL2	SGOL2	shugoshin-like 2 (S. pombe)
RAB26	RAB26	RAB26, member RAS oncogene family
LOC100996813		
BRIP1	BRIP1	BRCA1 interacting protein C-terminal helicase 1
SEMA7A	SEMA7A	semaphorin 7A, GPI membrane anchor (John Milton Hagen blood group)
GTSE1	GTSE1	G-2 and S-phase expressed 1
CTHRC1	CTHRC1	collagen triple helix repeat containing 1
LRRN1	LRRN1	leucine rich repeat neuronal 1
FAM150A		
CDH3	CDH3	cadherin 3, type 1, P-cadherin (placental)
MC2R	MC2R	melanocortin 2 receptor (adrenocorticotropic hormone)
LY6D	LY6D	lymphocyte antigen 6 complex, locus D
LOC100128529		
TMEM158	TMEM158	transmembrane protein 158
LOC100129516		
CENPM	CENPM	centromere protein M
CXCL14	CXCL14	chemokine (C-X-C motif) ligand 14
C20RF40	C20RF40	chromosome 2 open reading frame 40
ADAMTS8	ADAMTS8	ADAM metallopeptidase with thrombospondin type 1 motif, 8
FIGF	FIGF	c-fos induced growth factor (vascular endothelial growth factor D)
CSF3	CSF3	colony stimulating factor 3 (granulocyte)
SLC7A2	SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2
SYNM		
FAM13C		
ITLN2	ITLN2	intelectin 2
WASF3	WASF3	WAS protein family, member 3
GRIA1	GRIA1	glutamate receptor, ionotropic, AMPA 1
ANKRD1	ANKRD1	ankyrin repeat domain 1 (cardiac muscle)
ADRB1	ADRB1	adrenergic, beta-1-, receptor
AKAP6	AKAP6	A kinase (PRKA) anchor protein 6
RSPO4	RSPO4	R-spondin family, member 4
PDE8B	PDE8B	phosphodiesterase 8B
ITIH5	ITIH5	inter-alpha (globulin) inhibitor H5
MYCT1	MYCT1	myc target 1
BMP2	BMP2	bone morphogenetic protein 2
ATP1A2	ATP1A2	ATPase, Na+/K+ transporting, alpha 2 (+) polypeptide
HSPB7	HSPB7	heat shock 27kDa protein family, member 7 (cardiovascular)
IL20RA	IL20RA	interleukin 20 receptor, alpha
SLC39A8	SLC39A8	solute carrier family 39 (zinc transporter), member 8
SIK3		
PIP5K1B	PIP5K1B	phosphatidylinositol-4-phosphate 5-kinase, type I, beta
RAMP2	RAMP2	receptor (calcitonin) activity modifying protein 2
SLC6A1	SLC6A1	solute carrier family 6 (neurotransmitter transporter, GABA), member 1
LONRF1	LONRF1	LON peptidase N-terminal domain and ring finger 1
PTH1R		
ADH1B	ADH1B	alcohol dehydrogenase IB (class I), beta polypeptide
RECK	RECK	reversion-inducing-cysteine-rich protein with kazal motifs
ANKRD29	ANKRD29	ankyrin repeat domain 29
TGFBR3	TGFBR3	transforming growth factor, beta receptor III (betaglycan, 300kDa)
TCF21	TCF21	transcription factor 21
MAMDC2	MAMDC2	MAM domain containing 2
IL1RL1	IL1RL1	interleukin 1 receptor-like 1
HBEGF	HBEGF	heparin-binding EGF-like growth factor
CCDC68	CCDC68	coiled-coil domain containing 68
CLEC3B	CLEC3B	C-type lectin domain family 3, member B
PRELP	PRELP	proline/arginine-rich end leucine-rich repeat protein
MS4A8		
WFDC1	WFDC1	WAP four-disulfide core domain 1
RASIP1	RASIP1	Ras interacting protein 1
CLSTN2	CLSTN2	calsyntenin 2
SYT11	SYT11	synaptotagmin XI
FIBIN		
FHL1	FHL1	four and a half LIM domains 1
S1PR1		
LPL	LPL	lipoprotein lipase
GPRASP2	GPRASP2	G protein-coupled receptor associated sorting protein 2
AOC3	AOC3	amine oxidase, copper containing 3 (vascular adhesion protein 1)

Supplement Figure.14 The Heat map and gene list correlation profile in the dataset for the comparison of C vs D by GSEA.

SampleName		
SPAG5	SPAG5	sperm associated antigen 5
GTSE1	GTSE1	G-2 and S-phase expressed 1
PPP2R3B	PPP2R3B	protein phosphatase 2 (formerly 2A), regulatory subunit B'', beta
KIAA1755		
IGF2BP1	IGF2BP1	insulin-like growth factor 2 mRNA binding protein 1
KRTAP9-4	KRTAP9-4	keratin associated protein 9-4
NHLRC1	NHLRC1	NHL repeat containing 1
MYO7A	MYO7A	myosin VIIA
CLSPN	CLSPN	claspin homolog (Xenopus laevis)
CDH3	CDH3	cadherin 3, type 1, P-cadherin (placental)
ACTL10		
DPEP1	DPEP1	dipeptidase 1 (renal)
CHTF18	CHTF18	CTF18, chromosome transmission fidelity factor 18 homolog (S. cerevisiae)
E4F1	E4F1	E4F transcription factor 1
FBXO27	FBXO27	F-box protein 27
BCAS4	BCAS4	breast carcinoma amplified sequence 4
B4GALNT3	B4GALNT3	beta-1,4-N-acetyl-galactosaminyl transferase 3
GFER	GFER	growth factor, augmenter of liver regeneration (ERV1 homolog, S. cerevisiae)
FGF8	FGF8	fibroblast growth factor 8 (androgen-induced)
SPPL2C		
LOC400965	LOC400965	-
C16ORF46	C16ORF46	chromosome 16 open reading frame 46
CD79B	CD79B	CD79b molecule, immunoglobulin-associated beta
SMIM1		
COL8A2	COL8A2	collagen, type VIII, alpha 2
ANKRD23	ANKRD23	ankyrin repeat domain 23
IKBKE	IKBKE	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon
DMBX1	DMBX1	diencephalon/mesencephalon homeobox 1
FAAH	FAAH	fatty acid amide hydrolase
TMEM198		
NHS	NHS	Nance-Horan syndrome (congenital cataracts and dental anomalies)
DNASE1L2	DNASE1L2	deoxyribonuclease I-like 2
B4GALNT4	B4GALNT4	beta-1,4-N-acetyl-galactosaminyl transferase 4
SNORA76C		
EBI3	EBI3	Epstein-Barr virus induced gene 3
PRR22		
INCENP	INCENP	inner centromere protein antigens 135/155kDa
GALE	GALE	UDP-galactose-4-epimerase
KLK4	KLK4	kallikrein 4 (prostase, enamel matrix, prostate)
P2RY6	P2RY6	pyrimidinergic receptor P2Y, G-protein coupled, 6
FAM19A5	FAM19A5	family with sequence similarity 19 (chemokine (C-C motif)-like), member A5
CHAF1A	CHAF1A	chromatin assembly factor 1, subunit A (p150)
ZNF750	ZNF750	zinc finger protein 750
LTBR	LTBR	lymphotoxin beta receptor (TNFR superfamily, member 3)
LOC100132363		
LOC155060		
GP1BA	GP1BA	glycoprotein Ib (platelet), alpha polypeptide
IGKV1D-13	IGKV1D-13	immunoglobulin kappa variable 1D-13
CACNG1	CACNG1	calcium channel, voltage-dependent, gamma subunit 1
TNFRSF18	TNFRSF18	tumor necrosis factor receptor superfamily, member 18
CST11	CST11	cystatin 11
DHRS4-AS1		
COX18	COX18	COX18 cytochrome c oxidase assembly homolog (S. cerevisiae)
PNPLA4	PNPLA4	patatin-like phospholipase domain containing 4
LOC100128571		
C20RF40	C20RF40	chromosome 2 open reading frame 40
LGALS13	LGALS13	lectin, galactoside-binding, soluble, 13 (galectin 13)
ANKRD29	ANKRD29	ankyrin repeat domain 29
SPATA8	SPATA8	spermatogenesis associated 8
CYB5R1	CYB5R1	cytochrome b5 reductase 1
LOC100131032		
CLDN18	CLDN18	claudin 18
OR8B4	OR8B4	olfactory receptor, family 8, subfamily B, member 4
LOC100131822		
TAC3	TAC3	tachykinin 3 (neuromedin K, neurokinin beta)
TAGLN3	TAGLN3	transgelin 3
FABP4	FABP4	fatty acid binding protein 4, adipocyte
ADAMTS8	ADAMTS8	ADAM metallopeptidase with thrombospondin type 1 motif, 8
MAGEA9	MAGEA9	melanoma antigen family A, 9
MT1M	MT1M	metallothionein 1M
MPP7	MPP7	membrane protein, palmitoylated 7 (MAGUK p55 subfamily member 7)
EDDM3A		
LEUTX		
HBB	HBB	hemoglobin, beta
LOC101929412		
ADH1B	ADH1B	alcohol dehydrogenase IB (class I), beta polypeptide
KIR3DX1	KIR3DX1	killer cell immunoglobulin-like receptor, three domains, X1
PAQR5	PAQR5	progestin and adipoQ receptor family member V
ZNF536	ZNF536	zinc finger protein 536
SMYD1	SMYD1	SET and MYND domain containing 1
RSPO1	RSPO1	R-spondin homolog (Xenopus laevis)
FIGF	FIGF	c-fos induced growth factor (vascular endothelial growth factor D)
BANF2		
FANCD2OS		
FLJ45743	FLJ45743	-
IP6K3		
HS3ST4	HS3ST4	heparan sulfate (glucosamine) 3-O-sulfotransferase 4
LOC102723456		
ZNF177	ZNF177	zinc finger protein 177
ADH1A	ADH1A	alcohol dehydrogenase 1A (class I), alpha polypeptide
GKN2		
DPYSL2	DPYSL2	dihydropyrimidinase-like 2
PLLP	PLLP	plasma membrane proteolipid (plasmolipin)
CDH2O	CDH2O	cadherin 20, type 2
TIMP3	TIMP3	TIMP metallopeptidase inhibitor 3 (Sorsby fundus dystrophy, pseudoinflammatory)
GRIA1	GRIA1	glutamate receptor, ionotropic, AMPA 1
PKNOX2	PKNOX2	PBX/knotted 1 homeobox 2
MROH3P		
BMP2	BMP2	bone morphogenetic protein 2
PRR5L		