

Table S1. mRNA-miRNA interaction network nodes.

mRNA	miRNA	mRNA	miRNA
CKS2	hsa-miR-26a-5p	MAPK14	hsa-miR-125a-5p
CKS2	hsa-miR-26b-5p	MAPK14	hsa-miR-185-5p
CKS2	hsa-miR-493-5p	MAPK14	hsa-miR-346
CKS2	hsa-miR-371a-5p	MAPK14	hsa-miR-489-3p
CKS2	hsa-miR-1297	MAPK14	hsa-miR-524-5p
FLVCR1	hsa-miR-23a-3p	MAPK14	hsa-miR-520d-5p
FLVCR1	hsa-miR-26a-5p	MAPK14	hsa-miR-506-3p
FLVCR1	hsa-miR-26b-5p	MAPK14	hsa-miR-33b-5p
FLVCR1	hsa-miR-30a-5p	PFKFB3	hsa-miR-19a-3p
FLVCR1	hsa-miR-30c-5p	PFKFB3	hsa-miR-19b-3p
FLVCR1	hsa-miR-30d-5p	PFKFB3	hsa-miR-26a-5p
FLVCR1	hsa-miR-23b-3p	PFKFB3	hsa-miR-26b-5p
FLVCR1	hsa-miR-30b-5p	PFKFB3	hsa-miR-93-5p
FLVCR1	hsa-miR-133a-3p	PFKFB3	hsa-miR-196a-5p
FLVCR1	hsa-miR-142-3p	PFKFB3	hsa-miR-224-5p
FLVCR1	hsa-miR-30e-5p	PFKFB3	hsa-miR-130a-3p
FLVCR1	hsa-miR-133b	PFKFB3	hsa-miR-301a-3p
FLVCR1	hsa-miR-1297	PFKFB3	hsa-miR-130b-3p
MAPK14	hsa-miR-19a-3p	PFKFB3	hsa-miR-381-3p
MAPK14	hsa-miR-19b-3p	PFKFB3	hsa-miR-339-5p
MAPK14	hsa-miR-22-3p	PFKFB3	hsa-miR-196b-5p
MAPK14	hsa-miR-23a-3p	PFKFB3	hsa-miR-449b-5p
MAPK14	hsa-miR-27a-3p	PFKFB3	hsa-miR-454-3p
MAPK14	hsa-miR-33a-5p	PFKFB3	hsa-miR-488-3p
MAPK14	hsa-miR-224-5p	PFKFB3	hsa-miR-300
MAPK14	hsa-miR-23b-3p	PFKFB3	hsa-miR-301b-3p
MAPK14	hsa-miR-27b-3p	PFKFB3	hsa-miR-942-5p
MAPK14	hsa-miR-124-3p	PFKFB3	hsa-miR-1297
MAPK14	hsa-miR-125b-5p	PFKFB3	hsa-miR-766-5p
MAPK14	hsa-miR-128-3p	TDRD9	hsa-miR-194-5p

“mRNA”and“miRNA”represent node; “-”represent edge.

Table S2. mRNA-RBP interaction network nodes.

mRNA	RBP	mRNA	RBP
CAPG	U2AF2	HPSE	U2AF2
CKS2	CSTF2T	MAPK14	ALYREF
CKS2	DDX54	MAPK14	CSTF2T
CKS2	ELAVL1	MAPK14	DDX54
CKS2	FMR1	MAPK14	DGCR8
CKS2	IGF2BP1	MAPK14	ELAVL1
CKS2	IGF2BP2	MAPK14	FMR1
CKS2	LIN28B	MAPK14	HNRNPA1
CKS2	SRSF1	MAPK14	HNRNPC
CKS2	U2AF2	MAPK14	HNRNPK
CLU	CSTF2T	MAPK14	HNRNPM
CLU	DDX54	MAPK14	IGF2BP1
CLU	HNRNPA2B1	MAPK14	IGF2BP2
CLU	HNRNPC	MAPK14	IGF2BP3
CLU	RBFOX2	MAPK14	LIN28B
CLU	SRSF1	MAPK14	RBFOX2
CLU	TAF15	MAPK14	SRSF1
CLU	U2AF2	MAPK14	TAF15
FLVCR1	CSTF2T	MAPK14	TARDBP
FLVCR1	DDX54	MAPK14	U2AF2
FLVCR1	DGCR8	PFKFB3	CSTF2T
FLVCR1	DHX9	PFKFB3	DDX54
FLVCR1	ELAVL1	PFKFB3	DGCR8
FLVCR1	FMR1	PFKFB3	DHX9
FLVCR1	FUS	PFKFB3	ELAVL1
FLVCR1	HNRNPA1	PFKFB3	FMR1
FLVCR1	HNRNPA2B1	PFKFB3	HNRNPA1
FLVCR1	HNRNPC	PFKFB3	HNRNPC
FLVCR1	HNRNPK	PFKFB3	HNRNPK
FLVCR1	HNRNPM	PFKFB3	HNRNPM
FLVCR1	IGF2BP1	PFKFB3	IGF2BP2
FLVCR1	IGF2BP2	PFKFB3	LIN28B
FLVCR1	IGF2BP3	PFKFB3	MOV10
FLVCR1	LIN28B	PFKFB3	RBFOX2
FLVCR1	MOV10	PFKFB3	SRSF1
FLVCR1	RBFOX2	PFKFB3	TAF15
FLVCR1	SRSF1	PFKFB3	TARDBP
FLVCR1	TAF15	PFKFB3	U2AF2
FLVCR1	TARDBP	PFKFB3	YTHDC1
FLVCR1	U2AF2		

“mRNA”and“RBP”represent node, “-”represent edge。 RBP : RNA binding protein。

Table S3. mRNA-TF interaction network nodes.

mRNA	TF	mRNA	TF
CAPG	CDK8	CLU	CREB1
CAPG	CDK9	CLU	CTCF
CAPG	CEBPA	CLU	DDX5
CAPG	CEBPB	CLU	E2F6
CAPG	CEBPD	CLU	EP300
CAPG	CREB1	CLU	ERG
CAPG	CREBBP	CLU	ETS1
CAPG	CTCF	CLU	FLI1
CAPG	CTCFL	CLU	FOS
CAPG	E2F1	CLU	FOSL1
CAPG	E2F6	CLU	FOSL2
CAPG	EBF1	CLU	FOXA1
CAPG	EGR1	CLU	GATA1
CAPG	ELF1	CLU	GATA3
CAPG	EP300	CLU	GLIS1
CAPG	ERG	CLU	HDAC1
CAPG	ESR1	CLU	HDAC2
CAPG	ETS1	CLU	HSF1
CAPG	FLI1	CLU	HSF2
CAPG	FOS	FLVCR1	E2F1
CAPG	FOSL1	FLVCR1	E2F6
CAPG	FOSL2	FLVCR1	EGR1
CAPG	FOXA1	FLVCR1	EP300
CAPG	FOXA2	FLVCR1	ERG
CAPG	GABPA	FLVCR1	ETS1
CAPG	GATA1	FLVCR1	FLI1
CAPG	GATA3	FLVCR1	GABPA
CAPG	GRHL2	FLVCR1	GATA1
CAPG	HDAC1	FLVCR1	GATA4
CAPG	HDAC2	FLVCR1	GTF3C2
CAPG	HDAC3	FLVCR1	HDAC1

CAPG	IRF1	FLVCR1	HDAC2
CAPG	JUN	FLVCR1	IRF1
CAPG	JUNB	FLVCR1	KLF5
CAPG	JUND	FLVCR1	MAX
CAPG	KLF1	FLVCR1	MAZ
CAPG	KLF3	FLVCR1	MYOD1
CAPG	KLF4	FLVCR1	BRD2
CAPG	KLF5	FLVCR1	NR2F2
CAPG	KLF9	FLVCR1	BRD4
CAPG	MAFF	FLVCR1	SP1
CAPG	MAX	FLVCR1	SP4
CAPG	MAZ	FLVCR1	SPI1
CAPG	MECOM	FLVCR1	TCF3
CAPG	MED12	FLVCR1	TFAP2C
CAPG	MITF	FLVCR1	YY1
CAPG	MYB	FLVCR1	CEBPA
CAPG	NANOG	FLVCR1	ZNF384
CAPG	NOTCH1	HPSE	BRD4
CAPG	NR2F2	HPSE	CDK9
CAPG	NR3C1	HPSE	CEBPA
CAPG	PAX5	HPSE	CEBPB
CAPG	PGR	HPSE	EP300
CAPG	POLR2A	HPSE	ERG
CAPG	RNF2	HPSE	ETS1
CAPG	RXRA	HPSE	FLI1
CAPG	SMARCA4	HPSE	FOXA1
CAPG	SMARCB1	HPSE	HDAC1
CAPG	SMARCC1	HPSE	JUN
CAPG	SMC1A	HPSE	KLF5
CAPG	SP1	HPSE	MAX
CAPG	SP4	HPSE	MAZ
CAPG	SPI1	HPSE	NFIC
CAPG	TAF1	HPSE	PGR
CAPG	TBL1X	HPSE	SPI1
CAPG	TBP	HPSE	TCF3

CAPG	TCF12	LCN2	BCL3
CAPG	THAP11	LCN2	BRD2
CAPG	USF1	LCN2	BRD4
CAPG	WDR5	LCN2	CBX3
CAPG	YY1	LCN2	CEBPA
CAPG	ZBTB7A	LCN2	EGR1
CAPG	ZFX	LCN2	ELF1
CAPG	ZKSCAN1	LCN2	EP300
CAPG	ZNF143	LCN2	FOS
CAPG	ZNF263	LCN2	GABPA
CAPG	ZNF76	LCN2	GATA1
CAPG	AR	LCN2	HCFC1
CAPG	ARNT	LCN2	JUND
CAPG	BCL6	LCN2	LMO2
CAPG	BHLHE40	LCN2	MAX
CAPG	BMI1	LCN2	MAZ
CAPG	BRD2	LCN2	POLR2A
CAPG	BRD4	LCN2	RCOR1
CAPG	CBFB	LCN2	SMARCA4
CAPG	CBX3	LCN2	SP1
CKS2	CREB1	LCN2	TBP
CKS2	CREBBP	LCN2	TEAD4
CKS2	E2F1	LCN2	TFAP2C
CKS2	EP300	MAPK14	AR
CKS2	ERG	MAPK14	BRD4
CKS2	ETS1	MAPK14	CEBPB
CKS2	FLI1	MAPK14	CEBPD
CKS2	GABPA	MAPK14	E2F1
CKS2	GTF2B	MAPK14	E2F2
CKS2	ATF1	MAPK14	EBF1
CKS2	HDAC1	MAPK14	EP300
CKS2	HNF4A	MAPK14	FLI1
CKS2	HSF1	MAPK14	FOXA1
CKS2	MAZ	MAPK14	GATA3
CKS2	BRD4	MAPK14	HDAC1

CKS2	SMARCA4	MAPK14	HDAC2
CKS2	TBP	MAPK14	IRF1
CKS2	TFAP2A	MAPK14	KLF5
CKS2	CDK9	MAPK14	LMNB1
CKS2	CEBPA	MAPK14	MAZ
CKS2	CLOCK	MAPK14	NR2F2
CLU	JUN	MAPK14	SMARCA4
CLU	JUNB	MAPK14	SPI1
CLU	JUND	MAPK14	SRF
CLU	KDM5B	MAPK14	TCF3
CLU	KLF4	MAPK14	TFAP2C
CLU	KLF5	MAPK14	TFAP4
CLU	KLF9	MAPK14	ZNF384
CLU	KMT2B	PFKFB3	BHLHE40
CLU	LMNB1	PFKFB3	BRD4
CLU	MAZ	PFKFB3	CBX3
CLU	NFIC	PFKFB3	CDK9
CLU	NOTCH1	PFKFB3	CEBPB
CLU	NR5A2	PFKFB3	CREB1
CLU	PBX1	PFKFB3	CTCF
CLU	PBX3	PFKFB3	DDX5
CLU	POLR2A	PFKFB3	E2F1
CLU	RAD21	PFKFB3	E2F6
CLU	RCOR1	PFKFB3	EBF1
CLU	SIN3A	PFKFB3	EGR1
CLU	SMARCA4	PFKFB3	ERG
CLU	SMARCB1	PFKFB3	ETS1
CLU	SMARCC1	PFKFB3	ETV1
CLU	SMC1A	PFKFB3	FLI1
CLU	SMC3	PFKFB3	FOSL1
CLU	SP1	PFKFB3	GABPA
CLU	SPI1	PFKFB3	GRHL2
CLU	SRF	PFKFB3	HDAC1
CLU	STAG1	PFKFB3	KLF4
CLU	TBL1X	PFKFB3	KLF5

CLU	TBP	PFKFB3	MAX
CLU	TCF12	PFKFB3	MAZ
CLU	TCF3	PFKFB3	MXI1
CLU	TEAD4	PFKFB3	RNF2
CLU	TFAP2C	PFKFB3	RUNX1T1
CLU	ZBTB7A	PFKFB3	SMC1A
CLU	ZNF263	PFKFB3	SPI1
CLU	AR	PFKFB3	SRF
CLU	ARID3A	PFKFB3	STAG1
CLU	ARNT	PFKFB3	TFAP2A
CLU	ATF3	PFKFB3	TFAP2C
CLU	BHLHE40	PFKFB3	USF1
CLU	BRD2	PFKFB3	USF2
CLU	BRD4	PFKFB3	WDR5
CLU	CBFB	PFKFB3	ZBTB7A
CLU	CDK8	PFKFB3	ZNF384
CLU	CDK9	TDRD9	E2F6
CLU	CEBPA	TDRD9	GABPA
CLU	CEBPB		

“mRNA”and“TF”represent node; “-”represent edge; TF : Transcription factors.

Table S4. mRNA-drugs interaction network nodes.

mRNA	drug	mRNA	drug
CAPG	1,4-bis(2-(3,5-dichloropyridyloxy))benzene	LCN2	Benzo(a)pyrene
CAPG	Benzo(a)pyrene	LCN2	Cisplatin
CAPG	Carbon Tetrachloride	LCN2	Cyclophosphamide
CAPG	Dietary Fats	LCN2	Cyclosporine
CAPG	Estradiol	LCN2	Dexamethasone
CAPG	Ethinyl Estradiol	LCN2	Dietary Fats
CAPG	pirinixic acid	LCN2	Diethylnitrosamine
CAPG	Tobacco Smoke Pollution	LCN2	Ethinyl Estradiol
CKS2	Dibutyl Phthalate	LCN2	Isoproterenol
CKS2	pirinixic acid	LCN2	lipopolysaccharide, E coli O55-B5
CLU	Benzo(a)pyrene	LCN2	Magnetite Nanoparticles
CLU	bisphenol A	LCN2	Paraquat
CLU	Dietary Fats	LCN2	Particulate Matter
CLU	Doxorubicin	LCN2	Soot
CLU	Estradiol	LCN2	Succimer
CLU	Folic Acid	LCN2	Tetrachlorodibenzodioxin
CLU	Soot	LCN2	Tobacco Smoke Pollution
CLU	titanium dioxide	LCN2	Trinitrobenzenesulfonic Acid
FLVCR1	Tetrachlorodibenzodioxin	MAPK14	Lipopolysaccharides
LCN2	Lipopolysaccharides	MAPK14	Anisomycin
LCN2	Acetaminophen	MAPK14	Cisplatin
LCN2	Doxorubicin	MAPK14	Paraquat
LCN2	Estradiol	MAPK14	sodium arsenite
LCN2	bisphenol A	PFKFB3	Benzo(a)pyrene
LCN2	Carbon Tetrachloride	PFKFB3	Dietary Fats
LCN2	Nanotubes, Carbon	PFKFB3	ethylene dichloride
LCN2	Ozone	PFKFB3	Nanotubes, Carbon
LCN2	Silicon Dioxide	PFKFB3	Oxygen
LCN2	titanium dioxide	PFKFB3	Tetrachlorodibenzodioxin
LCN2	1,4-bis(2-(3,5-dichloropyridyloxy))benzene		

“mRNA”and“drug”represent node; “-”represent ed

