

eQTL Network Expansion

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Load data:

```
genes <- read.table("~/Documents/NeXTProject/connected.txt", header=TRUE, sep="\t")
g=as.matrix(genes)
y <- graph.edgelist(g, directed=FALSE)
```

The spin glass algorithm requires a fully-connected network, so let's check for that.

```
is.connected(y)
```

```
## [1] TRUE
```

Let's start the community detection process:

Parameters:

update.rule - “simple” and “config”. “simple” uses a random graph with the same number of edges as the baseline probability and “config” uses a random graph with the same vertex degrees as the input graph.

gamma - This specifies the balance between the importance of present and non-present edges in a community.

```
#Run the community detection algorithm
sg <- spinglass.community(y, weights = E(y)$weight, update.rule="config", start.temp=1, stop.temp=.80, g;
```

Lets look at our output from the community detection algorithm

```
#Get community sizes
sizes(sg)
```

```
## Community sizes
##   1    2    3    4    5    6    7    8    9    10   11   12   13   14   15
## 554  328  266  596  291  400  679  349  357  634  731  275  669  935  456
##   16   17   18   19   20   21   22   23   24   25
##  250  337  439  315  629  566 1090  314  459  578
```

```
#Get node memberships
membership(sg)
```

```
##          USO1          ARID4B          BRD8          C1orf94
##            7            24            25            7
##          CACNG5          CACNG7          CASP3          CASP8
##            9            22            24            24
##          COPS4          DAAM1          EEA1          EEF1D
##            7            11            5            15
##          EIF3D          ELAVL3          FAH          GABPB1
##            15             7             9            22
```

##	GAK	GOSR1	GOSR2	HSPA8
##	18	13	13	13
##	KIAA0020	LIX1L	MOB2	PLCG1
##	15	23	7	10
##	PNISR	PNN	PPP1R12A	PRICKLE2
##	22	21	2	8
##	PRICKLE3	PRPF3	PTP4A3	RAB6A
##	8	21	9	13
##	RPL30	RPL7	SNRNP70	TFDP2
##	15	15	21	22
##	YKT6	ZNHIT1	ZRSR2	ENSG00000137970
##	13	25	21	15
##	2-Mar	STX6	SNAP29	STX16
##	18	13	13	13
##	5-Mar	DENR	FIS1	MFN2
##	19	19	19	16
##	RPS27A	UBB	UBC	ENSG00000196084
##	19	2	19	19
##	ADI1	GTF2E1	KIAA0195	MAPK1
##	1	25	18	18
##	MCOLN3	MPDZ	MSS51	NUAK1
##	6	14	7	7
##	RPS4X	RPS8	RPS9	RPSA
##	15	15	2	6
##	RPSAP58	TAF10	VDAC3	ENSG00000151514
##	6	25	6	22
##	ENSG00000101898	ENSG00000187899	ASPG	MFN1
##	6	15	8	5
##	PAK7	ABHD1	ACO2	ACOX1
##	14	19	6	20
##	ACSL4	ACSS2	ACTC1	ACTG1
##	6	6	2	2
##	ACTG2	ACTN1	ACTN4	ACTR3
##	2	2	18	2
##	ACVR1	ADAM19	ADRBK1	AGGF1
##	18	19	14	10
##	AHRR	AHSA1	AIFM1	AK3
##	2	6	21	19
##	ALYREF	ANXA1	ANXA2	ANXA6
##	21	14	18	2
##	AP2A1	AP2B1	AP2M1	AP2S1
##	18	18	18	2
##	ARFGEF2	ARPC2	ARPC3	ASAP1
##	15	2	2	19
##	ASAP2	ATAD3A	ATIC	ATP2A2
##	23	2	6	17
##	ATP5B	ATP5C1	ATP6V1A	ATP6V1B2
##	18	18	6	13
##	ATP6V1F	ATXN10	ATXN3	BAG2
##	13	1	19	21
##	BAG6	BCAR3	BCLAF1	BCR
##	4	1	2	17
##	BIN3	BMP2K	BMPR1B	BOLA3
##	13	18	22	4

##	BOP1	C11orf54	C6orf48	C7orf55-LUC7L2
##	15	19	1	2
##	CA2	CAD	CAP1	CAP2
##	14	13	6	6
##	CAPZB	CAV1	CBL	CBLB
##	2	1	10	2
##	CBS	CCAR1	CCM2L	CCNA2
##	6	21	2	22
##	CCNC	CCT2	CCT3	CD2AP
##	21	17	17	12
##	CD59	CDC20	CDC25A	CDC34
##	2	19	6	22
##	CDC7	CDK19	CDK8	CDKN1A
##	25	21	21	22
##	CDT1	CFL1	CFL2	CFTR
##	6	2	2	1
##	CHEK2	CHIA	CIRH1A	CLPB
##	25	15	15	6
##	CNOT1	CNOT3	COPA	COPB2
##	11	13	6	6
##	CORO1B	CORO1C	CPSF3	CSE1L
##	2	2	21	17
##	CSF3R	CTNND1	CTPS1	CTTN
##	10	1	6	2
##	CYB5R2	CYCS	CYP3A5	CYP4F2
##	25	6	13	13
##	CYP51A1	DAPK3	DARS	DAXX
##	13	2	6	22
##	DBN1	DCD	DDR2	DDX18
##	2	11	24	15
##	DDX31	DDX3X	DDX3Y	DDX5
##	21	17	15	2
##	DDX52	DHRS11	DHRS2	DICER1
##	17	6	19	21
##	DIP2B	DKC1	DLGAP4	DLST
##	19	15	14	2
##	DNAJA2	DNAJA3	DNAJB1	DNAJB2
##	17	17	1	6
##	DNALI1	DNM2	DUSP1	DUT
##	21	21	18	2
##	DYNLL1	EEF1A1	EEF1GP1	EEF2
##	2	13	17	6
##	EFNB1	EGFR	EIF1AX	EIF2B3
##	1	2	15	15
##	EIF2B5	EIF2S1	EIF3A	EIF3B
##	15	15	15	15
##	EIF3C	EIF3E	EIF3F	EIF3G
##	15	17	15	15
##	EIF3H	EIF3I	EIF3K	EIF4A1
##	15	17	15	6
##	EIF4A2	EIF4A3	EIF4E	EIF5A
##	15	2	15	6
##	EIF5B	ENO1	ENO3	ENTHD1
##	15	19	6	13

##	EPHA2	EPHB4	EPN3	EPS15
##	18	18	13	6
##	ERCC4	ESX1	EVI5	EXOC3
##	25	15	19	13
##	EXOC4	FAU	FBXO9	FBXW7
##	21	15	19	17
##	FDPS	FKBP1A	FLII	FLNA
##	6	6	2	2
##	FLNB	FSCN1	FSHR	GAPDH
##	2	2	19	6
##	GCH1	GCK	GFPT2	GGA1
##	6	19	6	19
##	GGA3	GLUL	GMFB	GMPPB
##	13	6	2	13
##	GMPS	GNAI1	GNAI3	GNL3
##	15	14	14	15
##	GOT1	GPATCH4	GPN3	GRB2
##	6	23	21	2
##	GRWD1	GSN	GSPT2	GSTM3
##	2	2	15	2
##	GSTP1	GTF2E2	H1F0	H2AFX
##	2	25	25	25
##	HADHB	HBA2	HEBP1	HECW2
##	17	11	19	20
##	HERC3	HGS	HIST1H1E	HIST1H2AB
##	19	7	1	25
##	HIST1H2AC	HIST1H2AD	HIST1H2AE	HIST1H2AH
##	25	25	25	25
##	HIST1H2AI	HIST1H2AL	HIST1H2BB	HIST1H2BC
##	25	25	25	25
##	HIST1H2BD	HIST1H2BE	HIST1H2BF	HIST1H2BG
##	25	25	25	25
##	HIST1H2BH	HIST1H2BI	HIST1H2BJ	HIST1H2BK
##	2	25	25	25
##	HIST1H2BL	HIST1H2BM	HIST1H2B0	HIST1H3C
##	17	25	25	2
##	HIST1H3D	HIST1H3E	HIST1H3H	HIST1H3I
##	2	2	2	2
##	HIST1H3J	HIST1H4A	HIST1H4B	HIST1H4C
##	2	25	25	25
##	HIST1H4D	HIST1H4E	HIST1H4F	HIST1H4H
##	25	25	25	25
##	HIST1H4I	HIST1H4J	HIST1H4K	HIST1H4L
##	25	25	25	25
##	HIST2H2AA3	HIST2H2AA4	HIST2H2BE	HIST2H2BF
##	2	2	25	25
##	HIST2H4A	HIST3H2A	HIST3H2BB	HIST4H4
##	25	25	25	25
##	HMGCLL1	HMGCR	HNRNPA1	HNRNPA2B1
##	6	13	2	2
##	HNRNPD	HNRNPF	HNRNPH2	HNRNPK
##	21	17	2	17
##	HNRNPM	HNRNPU	HRSP12	HSP90AA1
##	21	2	13	1

##	HSP90AB1	HSPA1B	HSPA1L	HSPA5
##	1	1	2	1
##	HSPA6	HSPA9	HSPB1	HSPD1
##	1	1	17	12
##	HSPH1	HTRA1	HUWE1	ICAM1
##	17	2	17	1
##	IDH3G	IKBKG	ILF3	IMPDH1
##	17	1	2	15
##	IMPDH2	IP6K1	IP04	IP07
##	2	15	17	17
##	IQGAP1	IRAK1	ITCH	ITPR3
##	2	17	23	2
##	KARS	KAT2B	KIAA1432	KIF3A
##	6	25	19	25
##	KLF5	KPNA2	KPNB1	KRT14
##	19	17	17	11
##	KRT17P2	KRT18	KRT5	KRT7
##	2	2	11	2
##	KRT8	LARP1B	LARS	LCK
##	2	15	6	10
##	LEPR	LEPROT	LGALS2	LGALS3
##	10	10	24	1
##	LIMA1	LM07	LONP1	LRPPRC
##	2	2	17	17
##	LRRC59	LRRFIP2	LUC7L3	LUZP1
##	1	2	21	2
##	MAP3K1	MAP3K19	MAP3K3	MAP3K7
##	10	15	18	1
##	MARS	MAST2	MAT1A	MCM2
##	17	14	6	25
##	MCM4	MCM7	MDM2	MDM4
##	25	17	22	22
##	MDN1	MECR	MED1	MED10
##	15	13	21	21
##	MED11	MED12	MED13L	MED14
##	21	21	21	21
##	MED15	MED16	MED17	MED20
##	21	21	21	21
##	MED21	MED22	MED24	MED25
##	21	21	21	21
##	MED27	MED28	MED30	MED31
##	21	21	21	21
##	MED4	MED6	MED8	MED9
##	21	21	21	21
##	MME	MPRIP	MTHFD1	MYBBP1A
##	1	2	1	17
##	MYH10	MYH14	MYL12A	MYL12B
##	2	2	2	2
##	MYL6	MYO1A	MYO1B	MYO3B
##	2	2	2	2
##	MYO5B	MYO6	NANS	NAP1L1
##	13	2	1	25
##	NCL	NEDD4	NEXN	NFKBIA
##	17	21	2	1

##	NFKBIB	NHP2	NHP2L1	NOL6
##	1	15	21	15
##	NOLC1	NOP56	NOP58	NPLOC4
##	21	17	21	13
##	NPM1	NSFL1C	NUB1	NUMA1
##	2	25	22	21
##	NVL	OAT	OLA1	ORC1
##	15	17	6	6
##	ORC5	OTUD7B	P4HB	PABPC1
##	25	19	21	16
##	PAK2	PARK2	PAWR	PC
##	24	14	2	6
##	PCMT1	PDLIM7	PEX19	PGAM2
##	2	2	1	6
##	PGD	PGK1	PHGDH	PKM
##	6	6	2	6
##	PKP2	PLEC	PLK1	PLS3
##	1	2	17	2
##	PM20D1	POLH	POLI	POLR1A
##	19	25	19	15
##	POLR1B	POLR1D	POLR2A	POLR2C
##	15	25	21	21
##	POLR2D	POLR2E	POLR2G	POLR2J
##	21	21	21	21
##	POLR2K	PPA1	PPIA	PPIF
##	21	6	2	6
##	PPP1CB	PPP1R9B	PPP2R1A	PPP3CA
##	2	2	14	2
##	PRDX1	PRDX2	PRKAA2	PRKAB2
##	2	14	19	18
##	PRKAR2A	PRKCB	PRODH	PSMA1
##	14	18	19	17
##	PSMA2	PSMA3	PSMA4	PSMA5
##	17	17	17	17
##	PSMA6	PSMA7	PSMB1	PSMB2
##	6	17	17	6
##	PSMB3	PSMB4	PSMB5	PSMB6
##	17	17	17	6
##	PSMB7	PSMC1	PSMC3	PSMC4
##	6	17	17	17
##	PSMC6	PSMD1	PSMD10	PSMD11
##	17	6	6	6
##	PSMD12	PSMD13	PSMD14	PSMD2
##	6	6	6	6
##	PSMD4	PSMD6	PSMD7	PSMD8
##	17	6	6	6
##	PSME2	PTK2	PTK2B	PTPN11
##	6	18	18	2
##	PTRH2	PWP1	PXN	RAB1A
##	19	15	1	13
##	RAD23B	RAI14	RAN	RAP1B
##	6	2	14	13
##	RAPGEF4	RBBP5	RBM10	RBM28
##	19	25	1	15

##	RBM34	RBM39	RBM5	RCC2
##	15	21	21	2
##	RCHY1	RDX	RECQL5	REL
##	9	24	21	1
##	RELA	RELB	RFC1	RHOA
##	1	1	25	24
##	RICTOR	RIPK3	RNF168	RNF5
##	23	2	19	5
##	RPF2	RPL10	RPL10A	RPL11
##	15	15	15	15
##	RPL12	RPL13	RPL13A	RPL13AP25
##	15	15	15	15
##	RPL14	RPL14P1	RPL15	RPL15P3
##	15	15	15	15
##	RPL18	RPL19	RPL21	RPL22
##	2	15	2	15
##	RPL23	RPL23A	RPL24	RPL26
##	2	2	2	15
##	RPL26L1	RPL27	RPL27A	RPL29
##	15	15	2	15
##	RPL3	RPL32	RPL35A	RPL36AL
##	15	15	15	15
##	RPL37	RPL39	RPL4	RPL5
##	15	15	16	15
##	RPL6	RPL7A	RPL8	RPL9
##	15	15	15	15
##	RPLP0	RPLP1	RPLP2	RPS12
##	15	15	15	15
##	RPS13	RPS14	RPS15	RPS15A
##	15	15	15	15
##	RPS16	RPS17	RPS19	RPS20
##	15	15	15	2
##	RPS21	RPS24	RPS25	RPS26
##	15	15	2	2
##	RPS26P6	RPS27	RPS29	RPS3A
##	15	15	15	15
##	RPS5	RPS6	RPS7	RPS7P1
##	15	15	15	15
##	RRM2	RUVBL1	RUVBL2	RYBP
##	6	3	2	24
##	S100A11	S100A6	S100A7	SAFB2
##	1	2	1	2
##	SAR1B	SARS	SEC23A	SEC24A
##	6	17	15	15
##	SERPINH1	SETX	SFN	SFPQ
##	2	11	23	21
##	SH3KBP1	SHC1	SHFM1	SHMT2
##	10	18	6	2
##	SKP1	SLC25A3	SLC25A4	SLC3A2
##	17	2	2	1
##	SLC40A1	SMAD2	SMAD4	SMAD7
##	19	22	22	22
##	SMARCA2	SMARCA4	SMC4	SMN1
##	15	25	17	21

##	SMPDL3B	SMURF1	SMURF2	SMYD5
##	20	22	22	25
##	SNCAIP	SNRPD1	SNRPD2	SNX4
##	19	21	2	1
##	SORBS2	SOS1	SPDYA	SPECC1
##	19	2	2	2
##	SPECC1L	SPTAN1	SPTBN1	SPTLC2
##	2	2	2	22
##	SQRDL	SQSTM1	SRP14	SRP9
##	17	17	2	2
##	SRP9P1	SRSF10	SRSF3	SSBP1
##	2	2	21	2
##	SSRP1	STAM	STAM2	SUPT3H
##	25	22	19	25
##	SV2B	SVIL	SYAP1	SYNPO
##	13	2	10	2
##	TAB2	TADA2A	TAF12	TAF5
##	1	25	25	25
##	TAF6	TAF9	TALDO1	TAOK2
##	25	25	6	2
##	TARDBP	TARS	TBC1D16	TBRG4
##	21	6	18	1
##	TCEB1	TCEB2	TEX261	TFAP2A
##	1	1	15	2
##	TFG	THEM6	THG1L	THRAP3
##	1	1	19	2
##	TKT	TMOD3	TMPO	TNFRSF1B
##	20	2	17	1
##	TNK2	TOM1	TP53	TP11
##	18	19	22	14
##	TPM1	TPM2	TRAF1	TRAF2
##	2	2	24	24
##	TRAF3	TREX2	TRIP12	TRNAU1AP
##	24	21	6	19
##	TRRAP	TSG101	TTF2	TTLL3
##	17	19	19	2
##	TTN	TUBA1A	TUBA1B	TUBA4A
##	18	14	18	13
##	TUBB4A	TUBB4B	TUFM	TXN
##	13	13	2	1
##	U2SURP	UACA	UBA1	UBASH3A
##	17	2	6	10
##	UBE2A	UBE2B	UBE2J2	UBE2K
##	25	25	13	20
##	UBE2N	UBE2V2	UBE4B	UBQLN1
##	25	25	13	6
##	UCHL1	UCHL3	UGDH	UGP2
##	20	8	2	15
##	USP10	USP14	USP22	USP30
##	25	6	25	13
##	VAC14	VARS	VAV2	VAV3
##	13	6	2	2
##	VCP	VDAC1	VDAC2	VIM
##	13	14	1	24

##	VLDLR	VPS13A	VPS28	WBP2
##	11	6	19	21
##	WWP2	XIAP	XPC	XP01
##	24	24	25	17
##	XRCC6	YBX1	YES1	YWHAE
##	17	21	18	17
##	YWHAG	YWHAQ	YWHAZ	ZBTB9
##	14	17	14	21
##	ZC3H15	ZFAND5	ZNF385A	ZNF827
##	9	19	19	4
##	ZRANB1	ENSG00000206212	ENSG00000215328	ENSG00000173534
##	5	2	1	2
##	ENSG00000182498	ENSG00000182754	ENSG0000013455	ENSG00000196501
##	2	15	2	25
##	ENSG00000182953	ENSG00000215769	ENSG00000212866	ENSG00000206380
##	15	17	1	1
##	ENSG00000206279	ENSG00000213555	ENSG00000188170	ENSG00000112727
##	22	2	11	2
##	ENSG00000206313	ENSG00000174766	ENSG00000197597	ENSG00000212695
##	4	15	25	15
##	ENSG00000130041	ENSG00000212664	ENSG00000171032	ENSG00000137379
##	15	15	19	13
##	ENSG00000215412	ENSG00000115254	ENSG00000125385	ENSG00000206271
##	2	6	15	1
##	ENSG00000146677	ENSG00000121031	ENSG00000206254	ENSG00000096155
##	15	18	5	4
##	ENSG00000196656	ENSG00000185637	ENSG00000138396	ENSG00000206206
##	2	13	15	22
##	ENSG00000096150	ENSG00000183311	ENSG00000215425	ENSG00000124642
##	15	13	2	25
##	ENSG00000170847	ENSG00000214225	ENSG00000175333	ENSG00000096171
##	2	19	15	6
##	ENSG00000176534	ENSG00000196681	ENSG00000198637	BRCA1
##	15	15	15	22
##	MYBL2	SYK	USP1	USP2
##	22	18	21	1
##	ANKRD20A11P	CDC42	CKS2	DCUN1D1
##	19	14	13	22
##	FHL1	GRAP	HAS1	HAS3
##	22	13	13	13
##	HDAC1	JMY	KIF23	KLHL8
##	17	22	1	7
##	KRAS	NEDD4L	NXF1	PEX14
##	10	23	21	1
##	POLR3G	POTEH	POTEI	POTEM
##	25	1	19	19
##	PRPF8	SIN3A	SPTLC1	STUB1
##	21	22	17	1
##	XRN1	ENSG00000108504	THUMPD1	6-Mar
##	17	18	20	4
##	C19orf10	CHN2	DNAJB11	FKBP2
##	23	4	1	6
##	PRPF40A	REG1B	RNF126	S100A4
##	21	4	4	7

##	SETDB1	TFDP1	TOMM20	UBL4A
##	4	22	4	4
##	UBL7	ENSG00000129951	8-Mar	ACBD3
##	7	17	23	23
##	ZSWIM5	C7	DPYD	GLT2
##	11	11	7	22
##	2-Sep	ARF6	C1QBP	CNP
##	20	20	17	14
##	EXOC7	FBL	GRM7	IKBKE
##	13	21	14	20
##	PAFAH1B1	PIH1D1	PIK3R1	PRMT1
##	3	14	10	20
##	SDC3	11-Sep	4-Sep	5-Sep
##	12	21	12	14
##	6-Sep	7-Sep	8-Sep	9-Sep
##	13	6	12	6
##	SIAH1	SNCA	SOCS7	STX1A
##	22	14	10	14
##	TUBG1	VHL	ENSG00000204523	ENSG00000189162
##	17	20	20	10
##	AAR2	ACLY	AP1B1	AP3D1
##	21	20	1	13
##	ARFIP2	ARHGAP35	ARRB1	ARRB2
##	4	22	8	14
##	BTF3	CACYBP	CLIC1	CS
##	20	20	20	13
##	CYTH2	DCTN1	DDX27	DHPS
##	14	24	15	20
##	DYNC1H1	EEF1E1	EIF4G1	EMC1
##	17	12	15	12
##	EXOC5	FANCI	GART	GBF1
##	13	9	13	16
##	GDI2	GSPT1	HDLBP	HEATR2
##	13	13	6	9
##	HINT1	HYOU1	KHSRP	KIF5B
##	19	20	21	23
##	MAD1L1	MAT2A	MCM3	MMP24-AS1
##	7	20	25	15
##	MSH2	NCAPG	PCBP3	PDIA3
##	17	9	21	7
##	PFDN2	PINK1-AS	PIP5K1A	PIP5K1C
##	25	13	10	10
##	PLS1	RABGAP1	RANBP3	RNASEH2A
##	1	11	11	25
##	RTCA	SEC11A	SEC13	SEC63
##	19	13	21	13
##	SRPRB	TBC1D4	TRIM23	UBE2D3
##	13	16	7	22
##	XPO5	YARS	ENSG00000206394	ENSG00000213007
##	17	15	20	14
##	ENSG00000078872	A2M	AASS	ABC7
##	15	11	17	17
##	ACOT8	AKAP8L	ALDH18A1	ANKFY1
##	17	17	17	24

##	17	17	17	17
##	C1QA	CCDC94	CCT6A	CDH1
##	11	21	17	1
##	CEPT1	CHD4	COIL	COPG1
##	17	17	7	17
##	COPG2	COPZ1	CTNNB1	CWF19L2
##	17	13	14	20
##	CYR61	DDX1	DEAF1	DHX15
##	17	17	7	17
##	EFTUD2	EIF4ENIF1	EP400	ERCC3
##	17	17	17	17
##	ERO1L	ETFA	F12	FAM58A
##	2	17	11	22
##	FBXO33	FBXW8	GAB1	GABRB1
##	1	17	10	3
##	GANAB	GBAS	GCDH	GP1BA
##	17	14	17	11
##	GP5	GP9	GTF3C1	GTF3C2
##	11	11	17	17
##	GTF3C3	GTF3C4	HDAC2	HELLS
##	17	17	17	17
##	HIGD1A	HLX	HMGB1	HNRNPL
##	17	22	25	21
##	HRK	IDH3A	IGF2BP1	IGF2BP2
##	24	17	17	17
##	IKBKB	ILVBL	IPO13	IP09
##	1	17	17	17
##	IQGAP3	KLKB1	KNG1	MAP3K14
##	17	11	11	1
##	MAPK3	MAPKAP1	MAX	MMP14
##	18	17	17	11
##	MOGS	MRPS22	MRPS34	MSH3
##	17	17	17	17
##	NDUFA8	NEK9	NFKBIE	NFYB
##	17	18	1	22
##	NIPSNAP1	NPEPL1	NUP133	NUP153
##	14	13	17	17
##	PELO	POLE	PRCP	PRKCZ
##	17	17	11	14
##	PRKD1	PRRC2A	PTGES2	PTPN14
##	18	7	17	17
##	RAF1	RANBP2	RFC2	RFC3
##	17	17	17	17
##	RNGTT	RNH1	RPL28	RPL39P5
##	17	17	15	5
##	SERPING1	SET	SHOC2	SIRT1
##	11	14	17	25
##	SLC25A1	SLC25A11	SLC25A12	SLIT2
##	17	17	17	17
##	SMARCC1	SNRNP200	SOD1	SRSF1
##	17	17	6	21
##	SSR4	SUCLG1	TCP1	TEC
##	17	17	17	18

##	TOP1	TOP2A	TRIM28	TTC27
##	17	17	17	17

	#	#	#	#
##	TUBGCP2	UBR2	WDR77	XRCC5
##	17	17	17	17
##	ZBTB44	ZNF121	ZNF281	ZNF608
##	22	17	17	25
##	ENSG00000214122	ENSG00000206427	ENSG00000157344	ENSG00000214133
##	14	6	9	17
##	GNB4	PGRMC1	RAB10	RAC1
##	14	14	14	14
##	RAP1A	ABCF2	AGPAT1	ALDH3A2
##	14	15	6	20
##	ANAPC10	ANAPC5	AP1S2	AP3B1
##	13	18	13	13
##	APLP1	ARHGAP12	ARHGAP21	ARIH1
##	4	13	13	20
##	ARMC3	ATG3	ATP2C1	ATP6VOA1
##	13	13	13	13
##	ATR	BCCIP	BMS1	BRMS1
##	18	13	15	22
##	BRSK1	BTAF1	BUB1B	CAPZA2
##	15	25	25	13
##	CBWD2	CBWD5	CBWD6	CDC123
##	13	13	13	15
##	CDC23	CDK11A	CDK12	CDX2
##	21	13	18	22
##	CEBPZ	CHCHD4	CHD9	CLEC4M
##	15	13	21	1
##	CLP1	CNDP2	CNOT2	COG4
##	21	6	13	13
##	COX17	COX6A1	CPSF2	CREBBP
##	4	23	21	22
##	CSF1	CSNK1D	CSNK1E	CSNK1G3
##	14	18	18	18
##	CTU2	CWC22	DCAF13	DCAKD
##	13	21	15	15
##	DCP2	DCPS	DDX24	DDX49
##	15	15	15	15
##	DDX54	DDX55	DDX56	DEPDC5
##	15	15	15	13
##	DHRS4	DIS3	DLEU1	DNAJC2
##	14	15	4	15
##	DNM1L	DNPEP	DOM3Z	DPH1
##	6	13	15	13
##	EEFSEC	EIF2A	EIF2AK4	EIF2B1
##	14	15	18	15
##	EIF2B2	EIF2B4	EIF2S2P4	EIF2S3
##	15	15	15	15
##	EIF5	ELOVL4	ELP3	EMG1
##	15	13	25	15
##	ER01LB	ESF1	EXOC2	EXOC6
##	15	15	13	13
##	EXOSC1	EXOSC2	EXOSC3	EXOSC4
##	15	15	15	15

	#	#	#	#
##	EXOSC5	FA2H	FAAH	FAM206A
##	15	13	1	21

##	FANCM	FAS	FAXDC2	FECH
##	25	24	13	1
##	FRY	FTSJ3	GADD45G	GDPD1
##	25	15	22	13
##	GLYR1	GTF2H3	H1FX	H3F3A
##	25	25	21	25
##	HCCS	HM13	HMGB1P1	HSD17B7
##	13	25	25	6
##	HSPE1	IBA57	ICK	ILF2
##	20	13	21	21
##	IMP3	ING1	ING3	IN080
##	15	25	25	25
##	IP05	ITSN1	IVL	JAK2
##	6	13	6	18
##	KDELR1	KDM3A	KDM5B	KDM6A
##	13	14	25	19
##	KIF11	KTI12	LACE1	LAMA4
##	13	13	13	4
##	LAMTOR1	LAMTOR5	LARP7	LEO1
##	1	4	15	25
##	LHX9	LSM1	LSM4	LYAR
##	13	22	21	21
##	MAF1	MAP3K5	MCM6	MCUR1
##	25	10	25	13
##	METTL2B	METTL7A	MIOS	MKI67IP
##	13	1	21	15
##	MPHOSPH10	MRM1	MRPL15	MRPL2
##	15	13	15	15
##	MRPL23	MRPL3	MRPL34	MRVI1
##	13	13	13	1
##	MSH4	MTDH	MTHFR	MVK
##	25	1	8	13
##	MYD88	MYH11	NAA20	NALCN
##	14	14	20	25
##	NBEA	NDUFA10	NDUFA9	NDUFB4
##	22	1	1	1
##	NET1	NEURL1B	NIF3L1	NIP7
##	15	14	7	15
##	NNT	NOB1	NOC4L	NOP14
##	1	15	15	15
##	NOTCH1	NSDHL	NSUN2	NUBP1
##	22	13	16	6
##	NXPE2	OGDH	ORC2	ORC4
##	2	6	25	25
##	ORMDL3	PAF1	PAPD5	PAPSS1
##	13	25	25	20
##	PATL1	PCSK7	PDCD11	PDCL2
##	21	13	15	13
##	PDHA1	PDHB	PEX13	PFN2
##	18	6	1	4
##	PGP	PHACTR2	PIGB	PIGS
##	20	5	13	13

##	PIK3R4	PIKFYVE	PLAUR	PN01
##	10	14	11	15
##	PNPLA7	POLA2	POLD2	POLR3A

##	15	25	25	25
##	POLR3C	POLR3F	POLR3K	PPA2
##	25	25	25	5
##	PPAN	PPCDC	PPP1CC	PPP1R12C
##	15	13	15	14
##	PPP1R3A	PPP2CA	PPP2CB	PPP2R1B
##	14	14	14	14
##	PPP2R2C	PPP2R5B	PPP6R1	PQBP1
##	25	14	6	21
##	PQLC1	PREPL	PRIM2	PRPF4
##	13	13	25	21
##	PSG9	PTPN4	PTPRCAP	PUS7
##	5	14	12	23
##	PYCR1	RAB27A	RAB43	RAB7A
##	6	14	21	13
##	RAD21	RAD51	RAD52	RANGAP1
##	9	22	25	21
##	RASA4B	RCL1	RECQL	REV1
##	13	15	25	25
##	RIOK2	RNF10	ROCK2	RPA2
##	15	15	18	25
##	RPAP2	RRP1B	RRP9	RRS1
##	21	15	15	15
##	RSRC1	SAE1	SBDS	SCO1
##	13	22	25	13
##	SDAD1	SDF4	SDHAF2	SEC31A
##	15	1	5	15
##	SERPINB9	SF3B3	SF3B4	SGPL1
##	4	21	21	13
##	SHBG	SKIV2L	SKIV2L2	SLC25A6
##	3	15	11	6
##	SLC30A1	SLC35F5	SLC36A1	SLC7A1
##	13	13	13	14
##	SLC9A3R1	SLM02	SMEK2	SNRPG
##	1	13	25	21
##	SNX30	SNX8	SORCS2	SORT1
##	13	13	13	1
##	SOX6	SPATA13	SPIRE2	SRCP
##	25	13	10	25
##	SRP68	SRP72	STK24	STK38L
##	13	13	6	13
##	STXBP2	SUPT4H1	SURF4	SYT6
##	13	25	13	13
##	TAF1	TAF2	TBL1XR1	TBL3
##	25	25	22	15
##	TCOF1	TECR	TEX10	TIA1
##	21	13	15	21
##	TIPRL	TM9SF1	TMRSS3	TMSB4X
##	6	1	13	4
##	TNP03	TOP2B	TOX3	TPR
##	6	25	25	9

##	TRAPPC2	TRAPPC5	TRDMT1	TRMU
##	13	13	4	25
##	TRUB1	TSR3	TTC37	TTLL12
##	12	12	15	22

##	TTLL9	TUBB1	TUBB8	TYW1
##	22	6	1	15
##	UBA2	UBR5	UBTF	UCKL1
##	22	21	21	13
##	ULK3	UQCRRB	UTP11L	VBP1
##	18	5	15	25
##	VPS11	VPS4B	WDR3	WDR33
##	13	13	15	4
##	WDR45	WDR74	WDR82	ZBTB16
##	13	15	25	22
##	ZNF24	ZNF259	ZNF593	ENSG00000206346
##	4	13	15	15
##	ENSG00000186979	ENSG00000196285	ENSG00000206353	ENSG00000144158
##	13	25	15	21
##	ENSG00000100931	ENSG0000007816	ENSG00000164605	ENSG00000173867
##	13	15	23	13
##	ENSG00000136112	ENSG00000206300	ENSG00000188463	ENSG00000198641
##	13	18	15	13
##	ENSG00000206492	ENSG00000111987	ENSG00000213764	ENSG00000206255
##	15	21	13	6
##	ENSG00000204221	ENSG00000160220	ABCF3	EXOC1
##	15	15	6	7
##	GDI1	GRIA2	GRIN1	PEX7
##	6	14	14	1
##	RALA	SNAP25	STX12	ENSG00000215766
##	14	14	13	12
##	BLOC1S2	DLG4	MAPK7	PBX1
##	7	14	13	22
##	SEC61G	MRRF	NR6A1	RHOQ
##	13	2	20	10
##	RTN4IP1	VPS51	WASH3P	ZC3H14
##	3	3	21	12
##	ABT1	ACIN1	ADH5	BRIX1
##	15	21	20	15
##	BUD31	CALM1	CALM2	CALM3
##	21	14	14	14
##	CDC37	CDK2	CFLAR	CHD1
##	1	18	24	25
##	CIAO1	CSNK2A1	CTR9	DDX10
##	12	18	11	15
##	DDX21	DDX23	DDX51	DHX38
##	21	21	15	21
##	DNTTIP2	EIF2D	ELAVL1	FCF1
##	15	25	21	15
##	FOXK2	FTSJ1	GAR1	HAT1
##	25	20	15	25
##	HIST1H1C	HNRNPA3	IDH1	IDH2
##	21	21	6	6
##	ILK	LMX1A	LSM5	LSM6
##	10	22	21	21

##	LUC7L	MCRS1	MSMO1	MTOR
##	21	22	13	18
##	NAA10	NAPA	NFX1	NGDN
##	25	13	21	15

##	NLE1	NOP10	NSA2	PABPN1L
##	15	21	15	15
##	PACSin3	PDP2	PIGO	PIN4
##	23	15	13	20
##	PMPCB	PPAT	PRPF31	RPL35
##	25	15	21	15
##	RRP15	SART1	SF3A2	SLC10A7
##	15	21	21	15
##	SMARCB1	SNRPN	SNURF	SURF6
##	25	21	21	25
##	TAF7L	TBC1D17	TUBA3C	TXNL4A
##	25	7	1	21
##	UPF1	USP15	UTP3	XAB2
##	21	25	15	21
##	ZCCHC10	ZNF622	ENSG00000206406	ENSG00000206267
##	21	15	18	15
##	ENSG00000170089	GNAQ	PICK1	TUBA8
##	25	14	14	5
##	AAK1	ACP1	ADSS	AIMP1
##	18	20	20	6
##	AKR1B1	ANKHD1	APRT	ATP5F1
##	20	1	6	5
##	AURKB	BCAP31	BPNT1	BRD3
##	18	24	20	18
##	C11orf58	CAMK2A	CAMK2B	CAMK2G
##	20	18	18	18
##	CAMKK2	CAPZA1	CASP7	CCDC58
##	18	20	24	7
##	CDC42BPA	CDKN2A	CISD2	COPS2
##	18	22	20	22
##	COTL1	COX4I1	DCTN2	DDT
##	23	5	14	20
##	DSP	DSTN	ECHS1	EIF4H
##	24	20	20	15
##	EMC3	EPHA7	ERP29	ETF1
##	8	18	20	11
##	ETFB	EZR	FAM162A	FAM49B
##	5	24	1	24
##	FBXW11	FER	FH	FKBP5
##	1	18	6	1
##	GARS	GL01	GLRX3	GNB2
##	6	5	6	14
##	GSK3A	HADHA	HMGCS1	HPRT1
##	18	20	6	20
##	INSR	IRF3	IRF5	ISYNA1
##	18	10	3	4
##	JAK1	LAGE3	LGALS3BP	LSM12
##	18	9	1	15
##	LTA4H	LYPLA1	MAD2L1	MAP2K2
##	20	10	25	18

##	MAP3K11	MAP3K2	MAPK9	MAPRE1
##	18	18	18	25
##	MARK2	MARK3	MAVS	MLEC
##	18	18	22	20
##	MRPL14	MRPS14	MSN	MTPN

##	20	19	24	20
##	NAA15	NARS	NASP	NEK11
##	18	6	2	18
##	NTMT1	NUDT21	PA2G4	PAK1
##	11	21	20	24
##	PCBP1	PDCD5	PDCD6IP	PDIA4
##	17	20	19	20
##	PDIA6	PDPK1	PFDN1	PFDN5
##	14	18	4	25
##	PFKL	PGRMC2	PHB2	PHKG2
##	14	5	20	18
##	PITPNB	PLK4	PPIB	PPP4C
##	20	18	20	22
##	PRKAA1	PRKCSH	PSME3	PTGES3
##	18	20	6	1
##	RAB11A	RAB14	RAB5A	RAB5C
##	14	20	13	20
##	RANBP1	RARS	RBM8A	RHOC
##	20	14	21	20
##	RPN1	RPS6KA3	RPS6KA4	RRM1
##	17	18	18	25
##	SDHA	SDHB	SFXN1	SND1
##	20	20	20	20
##	SNRPA1	SNRPB2	SNX3	SSB
##	21	21	13	18
##	SSR1	ST13	STK16	STK4
##	9	11	18	18
##	STRAP	SYNCRIP	TAGLN2	TANK
##	21	24	20	18
##	TBCA	TBK1	TBKBP1	TBR1
##	25	18	18	15
##	TFAM	TFRC	THOP1	TMEM189-UBE2V1
##	19	20	12	20
##	TMEM33	TOMM34	TPD52	TPM3
##	14	20	14	1
##	TPM3P4	TPT1	TSN	TSNAX
##	1	6	20	22
##	TYK2	UBE2I	UGGT1	VMA21
##	18	22	12	20
##	ENSG00000099964	ENSG0000144785	ENSG0000147507	ENSG0000183093
##	20	20	18	15
##	ENSG0000168775	ENSG0000206088	ENSG0000115128	ENSG0000159186
##	20	22	21	5
##	ENSG0000166998	ASCC2	CACNB4	CBX4
##	23	7	4	22
##	CCT7	CPE	EPN1	GCOM1
##	13	4	22	21
##	GSTM4	HNRNPUL1	HSPB3	HTT
##	9	21	4	4

##	LEPRE1	LYPLA2	MAFG	MED12L
##	21	3	22	10
##	MOB4	PAFAH1B3	PMF1	RAB25
##	14	4	22	22
##	RBM23	SELENBP1	SMPD3	TGIF1
##	16	22	4	22

##	ZBTB45	CLIP1	MAP1B	NDE1
##	6	16	14	3
##	NDEL1	ABL1	AGPAT4	ARFGAP2
##	7	18	10	13
##	ASNSD1	CASP4	DUS1L	ERGIC3
##	24	24	23	6
##	GIT1	LIMK2	MPI	MYLK
##	4	18	6	10
##	NCK1	NSUN5	SEC14L4	SH3RF1
##	10	6	13	14
##	SORBS3	SYN1	TBCK	TRIP10
##	11	14	25	13
##	URM1	ENSG00000112526	ESCO1	GCC1
##	22	25	20	7
##	HDGF	HMX3	HS6ST1	MRPL41
##	6	14	20	14
##	NGEF	PDRG1	PRKCI	RPAP3
##	14	14	14	21
##	SLC7A6OS	TCP11L1	ENSG00000115953	ANK3
##	7	13	14	22
##	ARAF	ARHGAP32	CD19	CD28
##	18	23	10	10
##	CD5	CHRNA7	CLK2	CRK
##	10	11	10	10
##	CRYAB	CSF1R	CTLA4	FCGR2A
##	14	10	10	11
##	FLT3	GAB3	GABRG2	GHR
##	10	2	3	10
##	GRN	GTF2H1	HRAS	IFNAR1
##	1	25	14	10
##	IL13	IL2RB	IL3RA	INPP5D
##	10	10	10	1
##	INPP5E	IRS1	JAK3	KHDRBS1
##	10	23	10	21
##	KIAA1598	LCP2	MAPK14	MRAS
##	4	10	18	10
##	MST1R	NOS2	PDGFRB	PIK3C2A
##	1	14	10	18
##	PIK3CB	PIK3CD	PIP4K2A	PIP4K2C
##	10	10	10	18
##	PLCB1	PLCB3	PLCD1	PLCD3
##	10	10	10	10
##	PLCG2	PSEN1	PTEN	PTPN6
##	10	22	10	10
##	RAC3	RASA1	RB1	SPNS1
##	10	10	22	11
##	SRC	SYNJ1	TEK	TGFB2
##	18	10	10	22

##	THEM4	TIAM1	TIE1	TLN1
##	23	11	16	11
##	TNK1	TOM1L1	TRAT1	ABCD2
##	18	7	13	3
##	ACN9	AHCYL1	AHCYL2	APEX2
##	15	20	20	25
...	--	--	--	--

##	AR	BTG1	BTG2	C1RBP
##	22	22	22	7
##	CNDP1	DDC	DERL2	FGF2
##	20	20	13	11
##	HABP4	HARS	HDC	HLTF
##	20	20	20	25
##	KHDRBS2	KHDRBS3	KLF12	KLF6
##	7	7	13	19
##	LIAS	MBP	MUC17	NCOA1
##	10	14	15	22
##	NOL4	OPLAH	RABGGTB	RIF1
##	21	16	12	4
##	S100A8	SDHD	SSSCA1	TIGD4
##	4	20	7	19
##	TIMM50	TNFRSF14	ENSG00000206452	METAP2
##	13	18	7	24
##	MYH2	S100A1	ANXA5	BLOC1S5
##	5	14	12	12
##	CAMK1	CASK	CCND2	CRTAP
##	12	14	12	12
##	FCER2	GDAP1L1	GP2	KRT19
##	12	12	12	12
##	MDK	NF1	SEPLG	SNX16
##	7	11	12	12
##	TGM2	TH	THBS2	THBS3
##	12	12	11	11
##	TNFRSF10B	ENSG00000160967	SYVN1	SNCB
##	12	25	6	22
##	ACSBG1	EPB41L3	KAT7	LIN7C
##	14	14	7	14
##	NAA38	3-Sep	1-Sep	ANLN
##	21	14	10	12
##	CDC42EP2	MDH2	ORC6	PIAS4
##	8	6	25	22
##	THNSL2	CDK14	PGM1	C6orf57
##	6	22	6	22
##	COPS7B	CREB5	DCC	HYI
##	22	22	11	22
##	KIF2A	MKL2	PEG3	POU2AF1
##	14	7	11	22
##	SCRIB	SPRY2	SYP	APP
##	14	10	7	11
##	BAD	BCL2L1	ELK1	FGR
##	14	24	22	18
##	FYN	GRK5	GRK6	KLK6
##	18	14	14	11
##	LAMP2	MAPT	PRKCE	SLC6A3
##	9	14	14	14

##	AKAP9	APBA1	GOT2	PRKAR1A
##	14	14	14	14
##	SLC6A1	STXBP5	TXLNA	VAMP8
##	7	14	14	13
##	ENSG00000204633	ACOX3	ANP32A	BMPR1A
##	14	18	18	18
##	C2CD5	CDK13	DOK2	DUSP3

##	18	18	18	18
##	EPHB1	ERBB4	FCGR1A	HCLS1
##	18	10	10	1
##	MAPK10	MARK1	MARK4	MELK
##	18	18	18	18
##	MLLT1	MS4A2	NLK	PDE4A
##	18	2	18	18
##	PIK3R2	PKN1	PTPN18	SH3BP2
##	10	18	18	10
##	SLA	SRRM1	TESK2	CYFIP1
##	10	18	18	21
##	DCAF7	DOCK7	MYO18A	PFDN4
##	14	14	14	25
##	PFDN6	TUBGCP5	TUBGCP6	ENSG00000204197
##	25	17	17	25
##	ENSG0000056678	ATE1	C19orf70	CAB39
##	25	18	6	1
##	CCDC59	CCNA1	CHMP2B	CUL2
##	14	22	16	22
##	CUL5	CUTA	EPAS1	HIF1AN
##	1	20	22	22
##	HSPB11	ICT1	ITGAL	KAT2A
##	13	13	22	25
##	KNTC1	KRTCAP2	LMAN1	LRRC41
##	25	20	10	1
##	LYZ	MRPS23	OS9	PEBP1
##	1	22	4	16
##	PIN1	PKD1L3	RNF139	RPA3
##	16	23	8	25
##	SP1	TGFB1I1	TIMM17A	USP33
##	22	22	10	14
##	VPS35	ZFP91	ZNF197	ENSG00000215694
##	13	10	20	20
##	AGL	ATP6VOD1	C12orf10	CBWD1
##	6	13	1	13
##	CDC14A	CORO6	CPSF1	DSPP
##	25	13	21	25
##	EXOSC9	GEMIN5	GTF2H2	KIF1B
##	15	21	25	14
##	MDP1	MPST	NR5A2	PCF11
##	13	6	22	21
##	POLE2	POLR3H	PRIM1	PRRC2C
##	25	25	25	25
##	RASA4	RGL3	RHOT1	RRN3
##	13	15	13	13
##	SHQ1	SIL1	SLC47A1	SRP54
##	15	13	13	6

##	UBQLN4	WARS	YOD1	ACAT2
##	7	6	13	20
##	AFP	APEH	CD81	CD8A
##	8	4	11	7
##	DIABLO	DYNLRB1	HSPA4L	IARS2
##	24	23	1	1
##	KPNA3	LRRC40	MRPL40	MT-CO2
##	1	8	22	5

##	SLC1A5	TPP2	TRIP11	ENSG00000206281
##	11	7	22	7
##	ENSG00000206208	ADRM1	CSF2RA	DNAJC8
##	7	6	10	21
##	DSG1	ERLEC1	JUP	MAGOH
##	16	9	24	21
##	ENSG00000215902	CASP1	DLG1	GPR37
##	21	24	14	1
##	OGT	RAD1	RGPD4	RGS3
##	4	19	14	14
##	SIM2	UBE2L6	DMPK	MYL1
##	10	20	7	7
##	MYL3	PMS2CL	TJP2	CLINT1
##	2	22	14	1
##	SNUPN	DIAPH1	DIAPH2	FHOD1
##	20	13	21	5
##	CCND1	BTF3L4	PPID	SLC13A1
##	22	25	6	13
##	SLC20A1	WDR89	DNAJB4	DNAJB5
##	13	25	13	22
##	RRAGB	AMPD2	HTATSF1	NMT1
##	13	20	21	24
##	PRKACB	UBE3D	WDHD1	ABCG2
##	14	13	25	1
##	ATM	BLK	CSNK1G1	EPHA5
##	18	18	18	18
##	FGGY	METTL1	PPP1R14A	SGK1
##	12	1	18	18
##	ENSG00000206429	ADK	AMN1	ATP5H
##	25	18	15	13
##	CASKIN1	CSNK2B	DRG1	EIF1B
##	21	18	15	15
##	EIF3J	EIF4E2	ELF1	EPB41
##	18	1	22	20
##	GABARPL2	GPCPD1	HIBCH	HIRA
##	20	25	25	25
##	INCENP	INTS6	ISCA1	JAZF1
##	21	19	15	25
##	KRR1	MAGEA2B	MKNK2	MRPL17
##	15	17	14	21
##	PAN2	PHF5A	RBBP6	REXO2
##	21	21	24	6
##	RNMT	RPL3L	RPS4Y1	SLBP
##	21	15	15	21
##	SNRPF	SOAT1	SORL1	SSU72
##	21	15	1	25

##	ENSG00000182367	ENSG00000197303	ACY3	ADSSL1
##	21	2	20	20
##	ALDH4A1	ASS1	CD01	EPRS
##	6	17	8	6
##	EPX	GAD1	GAD2	GLS2
##	2	20	20	6
##	HPD	LDHA	LDHAL6A	LDHAL6B
##	16	14	6	6
..

##	LDHC	LPU	PAM	YARSZ
##	6	24	7	19
##	CHMP3	MAPK8	ACTA1	ALAD
##	19	18	14	14
##	ALB	ALG14	APBB1	ATAD1
##	11	13	21	20
##	BAG3	BBS1	BCS1L	CERS2
##	1	8	5	13
##	COL7A1	COX15	DNAJC21	DPH5
##	11	5	15	20
##	DTX4	ENDOG	ENTPD6	EXO1
##	22	25	13	1
##	HSD11B1	IGBP1	ITPA	KDSR
##	15	25	13	1
##	KMO	LETM1	LIPT2	NARFL
##	19	5	15	16
##	NCAPD2	NOA1	PCYT1A	PDSS1
##	9	8	6	13
##	PEPD	PHC3	PIGK	PROSC
##	15	11	13	25
##	SCMH1	SLU7	SYNJ2	TBC1D22A
##	22	21	23	13
##	XPO6	YAF2	ZNF703	ENSG00000169910
##	12	22	8	6
##	ENSG00000100357	AMPD1	AMPD3	CANT1
##	20	20	11	21
##	ENTPD4	ENTPD5	GMPR	GPANK1
##	20	20	21	7
##	IST1	OSGEP	PUS1	SMC6
##	15	6	15	10
##	ENSG00000096153	ACAT1	ADHFE1	ALDOA
##	4	6	6	18
##	ASF1B	ATAD2	ERCC2	GALT
##	25	25	25	6
##	GYS1	HIP1R	LIPA	ME3
##	6	13	10	6
##	MTR	NOS1	PPP1R7	RAD54L
##	14	14	25	25
##	ENSG00000187558	BIN1	CRTC2	FAM117B
##	15	9	23	23
##	GFM1	KLC2	MRE11A	PPP1R3D
##	1	23	25	23
##	ROBO2	SH2D3A	SH3BP4	UBE2C
##	10	23	23	23
##	UBE2D1	UBE2D2	UBE2D4	UBE2E1
##	22	22	25	22

##	UBE2E2	UBE2E3	ENSG0000073169	CCNB1
##	22	22	25	22
##	CDK1	DLX2	GMNN	INTS10
##	18	22	6	22
##	ORC3	POLA1	TBC1D23	ERI1
##	25	25	22	20
##	SMAD3	STAT1	STAT2	STAT3
##	22	10	10	10
##	STAT4	STAT5A	STAT5B	STAT6

##	22	10	10	22
##	GOLGA8EP	GRM5	PPP1R3C	ENSG00000188532
##	16	14	14	8
##	PAAF1	UBLCP1	BAZ1B	CHKB
##	6	6	11	11
##	TOPBP1	XYLB	R3HDM1	CCND3
##	22	15	13	22
##	CCNY	IGHA2	FRK	CHMP6
##	21	7	18	19
##	GK2	RPL37A	RPL38	RPS2
##	20	15	15	15
##	RPS23	ATXN7	CFDP1	CLK4
##	2	2	25	25
##	HIST2H2AB	MEAF6	ADARB2	ARID1B
##	25	25	4	4
##	ARID5B	BRD7	FAM98A	H2AFB3
##	4	4	4	25
##	LRPAP1	MEIS1	NCOR2	PARP12
##	4	4	22	22
##	PBXIP1	SUMO3	KIF3B	RAPGEF5
##	4	4	9	5
##	RFT1	ENPP1	ENPP2	ENPP3
##	17	20	20	20
##	G6PC	G6PD	GPI	GYG1
##	12	23	13	6
##	HK1	HK2	HK3	PRPS1
##	24	4	7	7
##	PRPS2	PYGB	RBKS	RPIA
##	7	14	7	7
##	S100B	ENSG00000173366	CD2BP2	GTF2F2
##	2	13	21	21
##	HNRNPA0	HNRNPH1	NCBP1	PCBP2
##	17	2	21	21
##	POLR2H	POLR2L	PSPC1	RBMX
##	21	21	21	21
##	SF3B5	SRSF2	U2AF1	CCNH
##	21	21	21	18
##	CDK7	DDB1	DDB2	ERCC5
##	18	21	4	22
##	HERPUD1	KIAA1377	PCNA	POLD4
##	12	4	25	25
##	RFC4	TCEA1	TP53BP1	ADAT2
##	25	21	14	21
##	ALPI	ALPL	ALPP	ALPPL2
##	20	20	4	20

##	BAG5	CPSF7	DBT	GPKOW
##	24	21	20	19
##	KIAA1429	MKI67	PTS	RNF113A
##	16	21	20	21
##	TLE3	A1CF	CDC40	ALG5
##	16	21	21	13
##	GPAA1	H2AFV	HEMK1	LENG8
##	13	25	20	21
##	POLE4	SAC3D1	SMG6	TMEM165
##	25	25	22	6

##	TSR2	GRB7	SF3A3	SH3GL3
##	10	10	21	10
##	DDX46	DHX8	DLAT	EIF4B
##	21	21	13	15
##	KIN	NCS1	PIGW	PRPF18
##	8	1	13	21
##	RAD50	SCFD1	SUPT5H	TIAL1
##	25	13	25	21
##	WDR59	TSEN2	CCDC97	DVL2
##	6	20	21	7
##	ENAH	EVL	SMARCE1	WBP11
##	21	21	21	21
##	WBP4	ZNF207	DHX33	CHORDC1
##	21	21	9	21
##	CNN1	ADAP1	CCNL1	CIR1
##	14	14	21	22
##	NBPF20	PRCC	SREK1	TTK
##	21	23	21	22
##	YTHDC1	PAIP1	SRRM2	ADAMTS1
##	21	21	18	14
##	AP2A2	APOE	CELA1	CTSE
##	22	11	11	4
##	F2	IL10	IL1B	KLK13
##	11	10	24	2
##	KLK2	KLK3	LCAT	LRP1
##	11	11	6	11
##	MMP2	MYOC	NGF	PAEP
##	11	11	10	22
##	PDGFA	PDGFB	SPACA3	TGFBI
##	11	10	6	11
##	ABI2	FURIN	NRG1	ACAN
##	7	11	10	11
##	CDC73	CR2	KRT10	TJP1
##	10	6	11	1
##	AFTPH	AMPH	AP3S1	CEP250
##	7	14	13	10
##	DISC1	DNM1	GMEB1	GTF2F1
##	7	14	22	21
##	HSPG2	KCNJ11	LAMA5	LAMC1
##	11	25	11	11
##	MBD1	NPR1	PEX6	PIAS3
##	22	21	1	22
##	PRSS8	RRBP1	SLC12A4	SMAD1
##	14	23	1	22

##	SNAP91	STRN	SYT1	TTC3
##	8	14	14	24
##	ZETB6	ENSG00000189231	APOA1	APOA2
##	22	22	11	11
##	APOA4	APOC1	APOC3	BBC3
##	11	11	11	11
##	CABLES1	CEP44	CLCA2	CROT
##	11	11	11	11
##	DGKG	DMD	GRAP2	ITGA2
##	11	11	11	11
##	TTAK4	TTM1	TTM	TTNA

##	AIAA1051	KR11	LA1	LDB3
##	11	11	11	11
##	LDLR	LRP2	LRP8	MAP2
##	13	11	11	14
##	MYL4	MYLK3	NEFM	NLRG4
##	11	11	14	11
##	NPHS1	PALB2	PCED1B	PDZRN4
##	11	11	11	11
##	PLTP	PRNP	QTRTD1	SCARB1
##	11	11	11	5
##	SCN5A	SDC2	SGOL2	SLA2
##	11	11	11	11
##	SLC9A8	SPAST	TLN2	TRAPP11
##	11	11	11	11
##	ENSG00000215756	ENSG00000215755	ENSG00000215754	ACHE
##	11	11	11	11
##	APBA2	APBA3	APBB2	APBB3
##	14	4	22	11
##	BACE1	BACE2	BID	CASP6
##	7	6	24	24
##	CLSTN1	COL1A2	COL4A1	COL4A5
##	11	11	11	11
##	CTRB1	CTRB2	CYP2G1P	DNAH1
##	11	11	6	14
##	DYNLRB2	GFAP	GPC1	KLC1
##	24	11	7	22
##	LRP1B	MEGF8	MT3	NCSTN
##	11	24	24	22
##	PGAM1	PSEN2	SERPINA3	SPON1
##	20	22	11	23
##	STXBP1	TGFB2	TNXB	ENSG00000198461
##	14	11	24	9
##	CSN2	LPA	PI3	SERPINA1
##	14	11	10	11
##	EDN3	INS-IGF2	F11	F13A1
##	12	10	11	11
##	F2R	F2RL2	F5	F9
##	14	14	11	11
##	IGHG1	IGKC	ITGA2B	ITGA5
##	11	11	11	11
##	PLAU	PROC	PROS1	SEBOX
##	11	11	11	11
##	SECISBP2	SERPINA5	SERPIN1C	SERPIN1D
##	9	11	11	11

##	SERPINE1	SPP1	THBS1	TSC22D1
##	11	11	11	11
##	TTPAL	USP6	ENSG0000056345	EPOR
##	11	13	11	10
##	IFNAR2	IFNGR2	IFNLR1	IL10RA
##	10	10	10	10
##	IL11RA	IL22RA1	IL22RA2	IL23R
##	10	10	10	10
##	IL2RG	IL6R	IL7R	OSMR
##	10	10	10	10
##	ENSG00000159113	FOS	JUN	PRTN3

##	10	22	22	11
##	SERPINF2	IGFBP2	SEMG1	SERPINA4
##	11	11	11	13
##	AOAH	ARMC2	CACNA1I	CDH12
##	11	11	11	11
##	CTSL	ELN	FGFR1	GJC2
##	11	11	18	11
##	ICAM4	IGHG2	IGHV3-23	IGLC2
##	11	11	11	11
##	IGLC3	IGLL1	IGLV3-21	KRT9
##	11	11	11	11
##	LTBP4	NUP214	OR2T6	OR8D2
##	11	11	11	11
##	PLAG1	PTHLH	PZP	RFX7
##	11	8	4	11
##	RTKN2	SAA4	SEMG2	SLP1
##	11	11	11	5
##	TGM4	ZNF232	ENSG00000206511	ENSG00000171362
##	11	11	11	11
##	C4BPA	CALCR	CANX	CD82
##	11	14	1	11
##	CTGF	CTSG	GULP1	HSP90B1
##	10	11	11	1
##	ITGB1BP1	LIPC	LTF	MMP13
##	23	10	11	11
##	MMP15	MMP16	MMP17	NOS1AP
##	11	9	24	14
##	PDIA2	PTCH1	SCN3A	SNX17
##	9	22	16	11
##	SYNJ2BP	TIMP1	DCN	HAPLN1
##	8	11	11	11
##	JUNB	CKM	COL3A1	ECE1
##	22	24	24	11
##	FBN1	FTL	GGTL1C	ITGA7
##	11	4	11	11
##	MYL2	NGFR	NTRK2	SORCS3
##	3	24	18	24
##	COPS6	IL36RN	JPH1	PTPRC
##	4	22	22	10
##	SRY	ART1	BMX	COL1A1
##	22	10	10	11
##	DYRK1B	DYRK2	ERBB2	FES
##	10	10	10	18

##	FGFR4	FLT1	HCK	IGF1R
##	10	10	18	18
##	KDR	MET	PTK6	SRMS
##	10	10	18	10
##	CDKN1C	CLDN4	LCNL1	UBE2O
##	22	11	7	21
##	USH1C	COL2A1	COL4A3	COL4A4
##	7	11	11	11
##	RAP2C	A4GALT	B3GALNT1	B3GALT5
##	23	14	23	20
##	NAGA	A4GNAT	B3GNT6	GALNT1
##	22	4	4	4

##	GALNT10	GALNT11	GALNT12	GALNT13
##	4	4	4	4
##	GALNT14	GALNT15	GALNT2	GALNT5
##	4	4	4	4
##	GALNT6	GALNT8	GALNT9	GBA
##	4	4	4	4
##	GMPPA	PIGM	PIGN	UGCG
##	4	4	4	4
##	WBSCR17	B3GALT1	B3GALT2	B3GNT3
##	4	4	4	4
##	B4GALT3	FUT4	FUT7	PTPRF
##	4	4	4	4
##	MUC2	MXD1	MUC4	B4GALT4
##	1	22	14	4
##	MUC13	BTBD9	ENPP7	SGMS1
##	1	22	4	4
##	CCNK	PGM2	ALG1	ALG2
##	22	13	13	13
##	ALDH3A1	AQP3	GIPC1	PIGX
##	20	13	14	13
##	SCD	SMPD2	VAPA	YIPF1
##	13	25	13	13
##	YIPF2	REEP5	GLB1	PTDSS1
##	13	13	4	4
##	PTDSS2	RTN1	RTN3	SGMS2
##	4	6	14	4
##	SMPD1	AAAS	EP300	IL4I1
##	4	9	22	9
##	NUP107	NUP155	NUP188	NUP205
##	25	9	9	9
##	NUP210	NUP35	NUP43	NUP54
##	9	9	9	9
##	NUP85	NUP88	NUP93	NUP98
##	9	9	9	9
##	NUPL1	NUPL2	POM121C	RAE1
##	9	9	9	9
##	AHR	CTBP2	HIST2H3D	HOXD4
##	22	22	25	22
##	N4BP2	PPARA	PPARG	ACOT9
##	22	22	22	20
##	ACTR6	ACTR8	AHCTF1	ARHGAP15
##	25	25	21	15

##	ATP13A1	CAMKK1	CDY1B	CDY2A
##	13	19	25	1
##	CDY2B	CDYL	CENPF	CETN3
##	1	1	10	25
##	CHTF18	CSNK2A2	CTDNEP1	DGCR14
##	17	18	13	7
##	ECI2	FEN1	GLE1	GSR
##	1	25	9	9
##	GTPBP4	H2AFZ	HORMAD2	LPIN1
##	15	25	25	13
##	MMS19	MORF4L1	MRPS2	NES
##	17	25	15	25
##	MOCO1	MTID160	MTID27	MTID62

##	PROTEIN	INTRON	EXON	INTRON
##	OGFOD1	PES1	PLAA	RMND5A
##	SEH1L	SETD2	SNW1	STT3B
##	TOP3A	UQCC	USP7	VPS72
##	WDR5	XRCC3 ENSG00000111788		NXF2
##	PANK1	SENP2	XP07	CDK4
##	DBI	ZFYVE9	ZFP36	FXR1
##	BLOC1S1	BLOC1S4	CCDC85B	CSTF1
##	DTNBP1	ERH	GSTT1	IRF2BP1
##	PAPLN	SUDS3	DYNC1LI1	PHC1
##	PHC1P1	STK3	STRN3	ARHGAP19
##	CCDC22	IN080B	MAD2L2	MRPL42
##	NUCB1	PPP1R21	RIBC2	SDCCAG8
##	WTAP	ARIH2	BRF2	C20orf24
##	GNL2	GSTK1	MRPL4	MYC
##	NEK6	NMD3	NUTF2	PHLDA3
##	PNKP	PRKAB1	RPL18A	SAP18
##	AMMECR1	AMMECR1L	BUB3	CDC14B
##	DUS3L	GAMT	GID4	GLTSCR2
##	IP011	KPNA5	MOB1A	MRPS16
##	ENSG00000182520	ENSG00000171549	AIFM2	ALK
##	15	15	13	10
##	9	15	21	10
##	13	6	15	13
##	9	6	13	9
##	ITIH1	PLA2G4F ENSG00000166285	13	25

##	MSI1	OSBP	QRICH2	RCC1
##	13	13	1	25
##	RRP12	SCYL1	SLC16A6	SMARCD1
##	15	13	4	25
##	SPATA5	TIMELESS	TNP01	TSTD1
##	25	25	1	13
##	ENSG00000206266	ARHGEF4	LPXN	RBPM5
##	15	10	7	7
##	TEX11	BUB1	KLRC4	KPNA6
##	7	19	8	6
##	MTRF1L	UQCRCFS1	CFH	F7
##	5	5	11	11
##	ITIH1	PLA2G4F ENSG00000166285		AACS

##	11	11	11	20
##	BDH1	EHHADH	HADH	HMGCL
##	20	20	20	20
##	HMGCS2	ACAA2	ACACA	ACOT12
##	20	20	20	20
##	OXCT2	PDHA2	ACADL	ACADM
##	20	6	20	20
##	ACADS	ACOX2	DHCR24	NPHP3
##	20	20	20	20
##	SCP2	SLC27A2	SLC27A3	AUH
##	20	20	20	20
##	MS4A7	FARSA	AADAC	ESCO2
##	6	6	20	20
##	HYAL3	KAT6B	ENSG00000196959	ACAD8
##	20	20	19	21
##	ACADSB	ACOT11	GPD1	HNMT
##	20	20	20	20
##	TMEM91	ENSG00000189311	SUN2	TRAIP
##	20	20	7	13
##	BMPR2	GUSB	HTR2A	AADAT
##	4	3	14	20
##	AKR1B10	HSD17B12	NT5C1B	RDH12
##	20	13	20	20
##	RDH13	C9orf41	CCDC86	PAK4
##	20	21	15	18
##	RUSC2	SUCLA2	SUCLG2	ZHX1
##	7	20	20	4
##	ACTR3B	ATP6VOB	EIF2S2	ELOVL5
##	13	13	15	13
##	EPT1	HHAT	MAOA	POMT2
##	13	22	20	13
##	RRAS2	SC5D	SEC61A1	SLC29A3
##	10	13	17	10
##	SLC35G1	SLC7A14	SLC7A4	STX10
##	13	13	13	13
##	TMED2	TMEM63A	UCHL5	YIPF5
##	13	13	6	13
##	ENTPD8	PNP	EPHX1	AAGAB
##	21	20	20	14
##	UNC119	ADAMTS9	ALDH2	ANXA3
##	4	15	20	4

##	ARL15	ARL4D	ATPAF2	CD247
##	4	4	5	10
##	CYB561D2	GIPC2	KDM1A	MRPS12
##	10	4	2	4
##	PTPRS	QTRT1	RUFY3	SEPHS1
##	4	12	4	4
##	ZFP64	ENSG00000206239	ENSG00000204218	ABL2
##	7	4	4	18
##	ACVR1B	ACVR2B	ADCK3	ALPK3
##	18	18	18	18
##	ANAPC7	ATAD3B	ATF2	AZI2
##	18	18	18	18
##	BTK	CLK1	DOK1	DYRK1A
##	18	18	18	18

##	FRYL	GRAMD1A	HIPK1	INPPL1
##	18	18	18	18
##	KIT	MAP4K2	MAP4K5	MAPK6
##	18	18	18	18
##	MNAT1	PKN3	PRKD2	RIPK2
##	18	18	18	18
##	SIK2	SIK3	SPEG	TAOK1
##	18	18	18	18
##	ENSG00000105216	ADAM15	CREB1	GPX1P1
##	18	22	22	6
##	TUSC2	EPHB3	PROX1	PTPRD
##	24	18	22	4
##	SIVA1	ACSL1	ACSL3	ACSL5
##	24	20	20	20
##	ACSL6	CPT1A	CPT1C	CPT2
##	20	20	20	20
##	CTNNA3	MAGI1	MAGI2	MYOZ1
##	14	14	14	7
##	PDLIM1	PIP4K2B	ZYX	ACVR2A
##	20	10	14	18
##	AJUBA	BMP2	BMP7	FANCL
##	13	22	22	20
##	FBXO30	FKBP4	FNTA	GDF5
##	22	22	10	18
##	ILKAP	INHBB	NEK8	NUAK2
##	22	11	3	24
##	PLEK	PLEKHB1	RAB6B	RAP2A
##	22	4	13	14
##	RXRA	SMAD9	STX8	THRB
##	22	22	13	22
##	WDR61	DACT2	GDF11	ENSG00000212974
##	4	23	20	17
##	ACVRL1	INHBE	MSTN	ADA
##	11	24	16	19
##	CCDC12	CD47	FBP1	MDH1
##	16	11	14	1
##	MITD1	PLD2	TKTL2	ANAPC4
##	9	10	14	13
##	CXCR2	RAB11FIP2	REPS2	TOE1
##	14	1	8	11

##	FAM46C	LDLRAP1	POM121	TERF2IP
##	7	4	7	1
##	ZBTB8A	ANKS1A	CDC42BPG	CGN
##	7	23	23	23
##	CPS1	EFEMP1	GAN	GPRIN2
##	14	7	23	23
##	HDAC4	KLHDC2	LAD1	MLLT4
##	22	23	23	14
##	NUDT14	REEP3	RND3	RRAS
##	10	23	23	10
##	SIPA1L1	TNS4	TRIM32	USP8
##	23	23	23	23
##	WDR37	ENSG00000182319	ATF7	BACH1
##	23	23	22	22
##	RATF2	CFRDR	DNTT2	FV12

##	PPM1C	SLC19A	PPM1D	PPM1E
##	22	22	22	7
##	FOSL1	FOSL2	FOXA3	GOLGA1
##	22	22	22	20
##	GTPBP2	HMGAI	JDP2	MAPK11
##	7	22	22	18
##	MAPK12	MAPK13	MAPKAPK5	NCOA6
##	18	18	18	22
##	NFIL3	PML	TRMT13	YY1
##	22	22	20	22
##	ATP5E	ATP5G2	ATP5G3	ATP5I
##	5	5	5	5
##	ATP5J	ATP5L	ERICH2	GIN1
##	5	5	6	19
##	HNRNPAB	HNRNPDL	HSPA4	MAF
##	24	24	1	22
##	MYH6	NF2	OTX2	PIK3R3
##	24	22	3	10
##	PRDX4	STARD13	USP12	ENSG00000198744
##	5	14	6	5
##	ENSG00000160916	CA12	DDX47	CDCA8
##	17	5	6	4
##	CENPA	MAPK15	METTL20	RPS6KA6
##	2	18	2	18
##	AMHR2	SMAD5	ICMT	CMTM3
##	24	22	7	7
##	EWSR1	FCER1G	GNG2	IGHMBP2
##	21	11	14	25
##	ITK	KCMF1	MAN2B1	PHYHD1
##	10	9	19	11
##	PPM1G	SH3BP5	TLR6	WASF2
##	6	11	24	21
##	CACNA1A	CACNA1B	CACNA1C	CACNA1D
##	22	14	14	14
##	CACNA1E	CACNA1F	CACNA1S	CALML3
##	14	14	14	14
##	CDC25C	CHAT	ETS1	ITPKA
##	22	18	22	14
##	ITPR1	PDC	PLCB2	PLCB4
##	14	25	10	10

##	PPM1F	RYR1	RYR2	RYR3
##	18	14	11	14
##	ADCY3	ATF1	CHEK1	CREM
##	21	22	22	22
##	DCLK3	LGALS9B	LGALS9C	LRRC7
##	18	14	14	14
##	PEA15	SPR	CEP63	IDI1
##	24	24	7	14
##	PEX1	DGKZ	CNOT7	FOXM1
##	1	10	22	3
##	GSTM2	MS4A3	RPA1	TSSC1
##	2	5	25	10
##	UHRF2	EGF	FIGF	HGF
##	25	10	10	10
##	IGF1	PDGFC	PDGFD	PGF

##	10	10	10	10
##	PIK3CA	PIK3CG	PIK3R5	SAFB
##	10	10	10	5
##	SHC3	SHC4	UBL5	VEGFA
##	10	10	17	10
##	VEGFB	VEGFC	RAD54B	APC
##	10	10	7	14
##	CBX3	CFHR4	CHKA	CTBP1
##	22	24	24	22
##	FGF1	GDNF	GFRA2	HOXA6
##	10	8	24	22
##	IWS1	LCORL	LEPREL4	LYST
##	23	24	24	7
##	MAP2K6	NPAS3	PAK6	PCGF1
##	24	24	24	22
##	PHC2	PRDM15	QRFP	SLC5A12
##	22	24	24	24
##	SPIB	STAB2	SYNE1	TTBK2
##	22	24	24	24
##	VAMP4	XK	XRCC1	XRCC4
##	13	5	7	7
##	ZNF655	BRD2	CBX2	CDK2AP1
##	24	25	22	4
##	FOXJ3	KLF9	LHX1	LIG4
##	25	25	22	25
##	MGAT3	MRPL38	MTF1	MYNN
##	4	4	6	8
##	NHLH1	PCCB	PDCL	SAP30L
##	22	20	18	20
##	SARS2	SERF2	SIX1	SMARCD3
##	15	7	7	25
##	ZNF521	ENSG00000206287	IRS2	PTPRH
##	5	22	23	1
##	SH2D1A	IL4R	ATP13A3	BICC1
##	10	10	23	23
##	CHRNA4	CLASRP	CTCFL	FOXO1
##	23	7	22	22
##	PGS1	PHF14	PHYHIP	PLEKHG4
##	23	23	4	1

##	PPP4R4	QSOX2	RGS7	RNF165
##	23	23	14	22
##	SEPSECS	SMOX	SRSF4	SRSF5
##	23	23	21	21
##	TDRD3	ENSG00000116148	EIF4G2	GNB5
##	23	14	24	14
##	RPL34	RPL36	RPS10	RPS11
##	15	15	15	2
##	RPS17L	RPS3	EFNA1	MYF6
##	15	2	18	24
##	RERE	SIX3	SPEN	ENSG00000143620
##	7	22	22	18
##	TMF1	BNIP2	FGF11	FGF12
##	25	24	10	10
##	FGF13	FGF14	FGF17	FGF18
##	10	10	10	10

##	FGF19	FGF20	FGF21	FGF23
##	22	10	10	10
##	FGF3	FGF5	FGF6	FGF7
##	10	10	1	10
##	FGF8	FRS2	GRB14	SNAI1
##	10	18	10	18
##	SOS2	HOMER3	ADD2	ARHGAP33
##	10	14	14	18
##	BCL3	CAV2	CAV3	CD226
##	22	1	11	1
##	CD36	CD44	CD48	CD55
##	11	11	15	11
##	CLNK	CNTN1	CNTNAP1	CSF2RB
##	10	14	14	10
##	EPHA4	EPHA8	FASLG	FGFR2
##	18	18	24	10
##	FLOT2	FNBP4	FYB	GP6
##	1	8	10	11
##	GRIN2A	HTR6	ITGA6	ITGAV
##	14	14	11	11
##	ITGB6	MS4A1	NEDD9	PDE4D
##	11	23	22	21
##	PTPRA	PTPRE	RBFOX2	SIT1
##	4	18	7	10
##	SKAP1	SLAMP1	SPHK1	SPHK2
##	10	3	13	13
##	SPN	TRPC6	TXK	TYR03
##	24	14	10	18
##	UCK2	ARHGAP9	MAP2K7	MAPKAPK2
##	5	10	10	18
##	NKX2-5	SNIP1	ACTA2	BTRC
##	22	22	21	1
##	DYNC1I1	FUS	HIST1H1D	IFIT1
##	14	21	21	22
##	LPCAT1	LRCH4	METTL3	MYH1
##	22	22	21	14
##	RALY	RSL1D1	SAP130	SAP25
##	21	21	22	22

##	SAP30	SCYL2	ZC3HAV1	ADCK2
##	22	21	22	1
##	ADIPOR2	AKT2	ALKB8	ALLC
##	16	14	21	12
##	AP1G1	ASNA1	ATP6V1H	ATXN2L
##	13	13	15	1
##	BHMT	BOLA2	C1orf123	CAPNS1
##	11	8	9	1
##	CAPRIN1	CLCN5	CMBL	COPB1
##	1	13	5	1
##	COQ2	CRAT	CYC1	EPB41L1
##	1	1	5	14
##	GALE	GLRX5	HERC6	MAP2K5
##	20	6	19	14
##	MON1A	MVP	NADSYN1	NSMCE4A
##	13	11	20	25
##	NIS1	PDK4	PEX10	PNPO

##	13	13	1	6
##	PPP5C	RAD17	RCN2	RRAGC
##	14	10	1	23
##	SEC61A2	SLC25A32	SLC26A11	SLC33A1
##	1	17	9	24
##	SLC34A1	SLC38A11	SORD	TAX1BP1
##	1	24	20	14
##	TDP2	TERT	TMEM87B	TRAF7
##	22	1	13	20
##	TRMT5	TSSK6	UNC45A	UNC50
##	14	1	9	13
##	XPNPEP1	YME1L1	ENSG00000212677	ENSG00000112478
##	16	22	13	13
##	ENSG00000179036	ENSG0000011177	ENSG00000206214	SORBS1
##	13	20	13	1
##	TMEM115	BAIAP2	DOK5	SH2B2
##	18	14	18	7
##	SNX2	SOCS3	IL9R	SOCS4
##	10	10	10	10
##	SOCS5	SOCS6	ENSG00000215778	BPTF
##	10	10	8	25
##	CBLC	CNTFR	IL12RB1	IL13RA1
##	10	10	10	10
##	IL13RA2	IL15RA	IL21R	IL2RA
##	10	10	10	10
##	LIFR	MPL	PIK3C2B	PIK3C2G
##	10	10	23	10
##	SOCS2	CD63	CRKL	KITLG
##	10	11	24	4
##	MATK	PTPRO	SPRED1	ARC
##	11	24	18	14
##	CACNG2	CASP9	DUSP14	LAMTOR3
##	14	24	18	1
##	MOS	NOM1	YWHAB	MAP3K12
##	1	6	17	8
##	RHOG	MYO1D	PLOD1	RPS27L
##	19	24	11	10

##	SC02	PRKCG	AVPR2	BCL6
##	20	18	4	22
##	CEP135	DUSP10	DUSP6	DUSP7
##	17	18	18	18
##	ELK4	HIVEP1	LMNB2	MAEL
##	22	7	11	7
##	MCL1	NKX2-1	NR5A1	NTRK3
##	24	22	22	18
##	PAOX	PLA2G12A	PLA2G12B	PLA2G1B
##	14	10	14	10
##	PLA2G2A	PLA2G2D	PLA2G2E	PLA2G2F
##	10	10	10	10
##	PLA2G3	PLA2G4A	PLA2G5	PLA2G6
##	10	10	10	10
##	PTPRR	RGS19	RHOB	ROS1
##	18	14	10	10
##	RPS6KB1	SLC9A1	SNCG	SREBF2
...

##	14	24	24	22
##	SRF	STMN1	TATDN1	TNFRSF25
##	22	20	19	24
##	TNIP1	TOB1	TSC2	WRNIP1
##	1	22	14	16
##	YBX3	ZMYND11	ENSG00000206377	ENSG00000206478
##	21	4	18	7
##	C4orf29	DUSP5	DUSP8	SUPT20H
##	12	18	18	5
##	TBX3	CCDC6	HMMR	IRX2
##	22	14	19	16
##	TAF1A	TAF1B	ZNF7	DUSP2
##	25	25	15	18
##	DUSP9	IRS4	MAP3K13	MAPK8IP1
##	18	17	10	14
##	MECOM	NFATC2	NFATC4	PTPN5
##	22	22	14	11
##	PTPN7	RAC2	ANKRD7	ARHGEF16
##	18	10	25	23
##	ARHGEF17	ATP6VOC	CHGB	ERRFI1
##	23	13	4	23
##	FANCF	NOL11	PACS2	REEP4
##	21	12	23	23
##	SAAL1	SAV1	SHROOM1	SIK1
##	12	23	23	18
##	MAP4	STK11	MLLT10	CCNT1
##	3	1	9	21
##	CCNT2	CDK6	CTDP1	E2F3
##	21	22	21	22
##	E2F5	ELL	ERCC8	GTF2A1
##	22	21	21	25
##	GTF2A2	GTF2H4	KAZN	NCBP2
##	25	25	25	21
##	NELFA	NELFB	NELFCD	POLD1
##	21	21	21	17
##	POLD3	POLR1C	POLR2F	POLR2J3
##	25	25	21	25

##	POU2F2	RBM48	RFC5	SUPT16H
##	4	4	17	25
##	TAF11	TAF13	TAF4	TAF4B
##	25	25	25	25
##	TAF7	TTF1	XPA	ENSG00000206349
##	25	24	25	22
##	ENSG0000032514	DHRS7	DHX36	GNB1L
##	25	1	1	12
##	OTUD4	PRR5	RPS6KB2	SMG1
##	1	1	18	12
##	VPS18	ENSG00000206376	ENSG00000137324	EDC4
##	13	14	14	12
##	NFIB	GNG12	MAP2K1	ADCY1
##	8	14	14	21
##	ADCY10	ADCY2	ADCY4	ADCY5
##	21	21	21	21
##	ADCY6	ADCY7	ADCY8	ADCY9
##	21	21	1	21

##	GMPR2	GUCY1A2	GUCY1A3	GUCY1B2
##	21	21	21	21
##	GUCY2C	GUCY2D	GUCY2F	NPR2
##	21	21	21	21
##	GPT	LDHD	UBE2H	PHKG1
##	6	6	25	14
##	PPP1CA	PPP1R3B	ATOH7	MYT1
##	17	14	22	12
##	PHLDB1	PITPNM1	PRDM1	RASGRF1
##	18	14	4	10
##	TPPP3	TRIAP1	ENSG00000176276	CCNG2
##	20	25	15	22
##	LRRC29	SPSB1	TCF7L2	ENSG00000206329
##	12	22	22	18
##	ENSG00000206256	PRKAG3	SLC2A4	RPRD1B
##	24	22	22	25
##	VPS8	WDR44	ZNF710	ANXA7
##	25	1	19	23
##	CACNA1H	PPP3R2	SLC8A1	ZMYND8
##	14	14	4	22
##	ENSG00000206325	ENSG00000197003	CIB1	GZMB
##	1	14	11	24
##	IGHM	PIAS1	ACKR6	ARFGAP1
##	11	22	23	13
##	ARHGAP5	GNA13	ITGB2	KCN2A
##	18	14	11	14
##	NPHP1	PITPNM2	BIRC2	GEMIN4
##	11	10	24	21
##	GXYLT1	KCTD12	NOD2	AMD1
##	20	4	15	6
##	ARNTL	CALD1	IL2	PEAR1
##	22	1	10	18
##	PTPN2	ARAP3	DRD4	ESR2
##	10	8	19	22
##	ETS2	FHIT	GJB1	HNF1A
##	22	12	1	22

##	KCNQ5	MT-ND2	PPARD	ENSG00000212876
##	19	8	22	14
##	DHX9	ICA1	SNRK	CASP14
##	2	6	5	24
##	CASP2	CASP5	LATS1	PRKRIR
##	24	24	24	3
##	ZC3H12A	SASS6	TNRC6C	LDHB
##	5	23	6	6
##	PPP6R2	ENSG00000173503	ARSE	HSH2D
##	1	24	4	3
##	ITFG2	PRLR	SOCS1	OTUD6B
##	3	10	10	18
##	TP53BP2	APLF	C1D	CLCA1
##	24	9	24	1
##	GNA11	RYK	TJP3	WFS1
##	1	1	1	1
##	WRN	ALCAM	CD24P4	CHST15
##	5	1	11	16
##	FCAR	FOLR1	GRIA3	H0XC10

##	8	25	14	1
##	PRAM1	S100A9	SLC4A1	AANAT
##	7	1	20	14
##	PRKACA	ABCA1	ADD1	AKAP14
##	14	14	14	14
##	AKAP3	ASIC1	ATP2B1	ATP2B2
##	24	14	14	14
##	CACNB2	CAMK1D	CDK16	CDK5RAP2
##	4	13	14	4
##	CETN1	CLDN3	DLGAP1	DMTN
##	10	1	14	7
##	ETV1	GABRB3	GALK2	GJA5
##	9	3	4	14
##	GLI1	GNAS	GNMT	GP1BB
##	14	14	6	11
##	GRIK2	HAND1	HDAC8	HMGN1
##	14	22	25	18
##	HMGN2	HMGN2P8	ITGA4	ITPR2
##	4	18	11	10
##	KCNH2	KCNJ12	LCP1	MEP1B
##	4	14	18	10
##	MYO5A	NIN	PDE3A	PDE3B
##	14	18	21	21
##	PFKFB1	PHKA1	PHOX2A	PKIG
##	14	14	22	24
##	PLIN1	PPP1R17	PPP1R1B	PRKACG
##	14	18	20	14
##	PTPN12	PTPN13	PYGL	RAP1GAP
##	18	24	6	14
##	RGS14	SLC2A2	SUFU	TPH1
##	14	5	7	14
##	YIF1A	YIF1B ENSG00000197369		ADAM22
##	13	13	14	14
##	AKT1S1	ALDOC	ARHGEF28	ATL3
##	24	14	14	9

##	BSPRY	C14orf166	CALB2	CBLL1
##	14	13	14	13
##	CDC25B	CDC5L	CDK17	CMPK1
##	22	7	14	6
##	DCLK1	DFFA	GLTP	HDAC5
##	14	24	14	22
##	HDAC7	HECTD4	HUS1	KLC3
##	22	10	22	15
##	KLC4	LANCL1	LARP1	MPP3
##	17	1	14	14
##	MRPS27	MYCBP2	MYOF	NFATC1
##	20	14	5	22
##	PARD6B	PCM1	PDE1B	PGLYRP1
##	14	7	14	14
##	RAB15	RALGPS2	RTCB	SH3GL2
##	14	17	3	14
##	SLAIN2	SLC25A22	SLC04A1	STK25
##	8	14	19	1
##	STK38	TBXAS1	UCP3	VAT1
##	^	^	^	^

	²⁰	¹⁴	¹⁴	¹⁴
##	ZYG11B	RNF20	RNF40	WDR12
##	7	5	23	15
##	VPS29	HDDC2	MAK16	YPEL4
##	13	10	15	20
##	CDC42BPB	PIGT	IPP	MCM10
##	11	13	22	25
##	COQ7	GPR88	SNRNP40	FMNL1
##	14	21	4	21
##	MLH1	MRPS24	PDCD7	CPA2
##	25	9	21	3
##	TGS1	TAL1	EIF4EBP1	MOSPD2
##	22	22	1	13
##	GPATCH11	RPL21P1	ENSG00000186244	OTC
##	6	25	23	13
##	ATP10D	KDM4B	MDC1	NLRP2
##	25	25	1	8
##	PPME1	ZNRD1	ENSG00000206502	UHRF1
##	25	25	25	25
##	TFAP2B	ZMPSTE24	ASL	ATP12A
##	22	1	25	1
##	CDK5RAP3	FAHD1	UTRN	ENSG00000100141
##	1	1	1	10
##	ENSG00000215727	RUNX1T1	AP1M1	FADD
##	1	22	11	24
##	ARNT2	DNAH9	DROSHA	EHMT1
##	22	22	22	22
##	KY	TNFRSF8	WDR35	ENSG00000215684
##	8	22	22	25
##	ENSG00000206234	ATP9B	SLC43A1	ENSG00000206440
##	7	23	7	21
##	DAK	DST	EIF4BP6	POP4
##	20	2	24	5
##	PRRC1	PUF60	SYMPK	TRMT6
##	16	21	21	15

	TUT1	HECTD2	PEX2	DUSP12
##	16	7	1	4
##	PDS5B	RAB8B	CSTF2	DDX42
##	9	13	21	21
##	HNRNPR	PABPN1	POLR2I	SNRPB
##	21	21	21	21
##	SRSF11	SRSF6	SRSF7	SRSF9
##	21	21	21	21
##	REV3L	STK19	ENSG00000206265	CKB
##	25	23	23	1
##	ERCC1	PPIH	LIME1	NINL
##	25	21	21	7
##	CHD8	KANSL1	KAT8	LAS1L
##	4	22	22	15
##	PHF20	FMNL2	FMNL3	SDK1
##	25	23	14	17
##	STIM2	UBR4	ZNF341	ZNF451
##	22	14	13	7
##	ETFDH	FBXO42	PTGES3L-AARSD1	HOOK3
##	3	19	2	19

##	TRIM51	SETD3	SLC16A14	ACSF3
##	23	5	14	16
##	ARHGAP17	PPM1D	DYNLL2	GINS4
##	7	9	14	25
##	GOPC	NCKAP1	OXA1L	PAFAH1B2
##	14	14	5	20
##	PIF1	RBBP4	ASCL3	PRPSAP2
##	25	22	22	11
##	RUNX1	SLC25A36	BTBD10	EEF1B2
##	22	15	16	15
##	KLHDC3	MPP6	PYROXD1	VTA1
##	7	4	4	7
##	ENSG00000102391	AARS	CNOT8	CYP3A4
##	15	6	13	15
##	NOL9	VANGL1	ENSG00000213705	ABHD11
##	15	8	20	13
##	CBX5	AMT	PAX9	TXNDC9
##	22	9	19	4
##	ASCC3	CHD2	FAM120C	IGHE
##	4	4	4	21
##	RBM33	RSBN1	STOM	ZNF317
##	4	4	4	4
##	ZNF592	ZSCAN12	FAM169A	KRT72
##	4	4	11	11
##	MOCOS	BCAS2	C16orf80	C19orf43
##	11	7	20	4
##	NIPBL	NRIP2	SNRPC	SUGP1
##	22	10	21	22
##	AKT3	CHMP4C	ENSG00000115934	SMNDC1
##	10	11	23	21
##	CLNS1A	GEMIN7	LSM10	LSM11
##	21	21	21	21
##	ZNF473	MT-CO1	MT-CYB	CASC3
##	21	5	5	21

##	GNPTG	RHOXF2	UPF3A	ENSG0000096467
##	4	7	21	5
##	ATP6V1G1	CKAP5	GABARAPL1	CACHD1
##	13	13	13	7
##	CSH1	CTSA	PPIE	DPP7
##	10	4	19	23
##	FOLH1B	SMARCD2	VWA5B2	ENSG00000198329
##	25	22	17	23
##	ENSG00000130288	DMAP1	AGXT	AGXT2
##	7	25	6	6
##	AIFM3	GPT2	IARS	DLD
##	6	6	6	2
##	MLYCD	MPG	OXCT1	PCCA
##	8	20	20	20
##	PDHX	PRDX3	SERBP1	ACYP2
##	6	4	8	20
##	ALDH1A1	ALDH1A3	ALDH1B1	ALDH3B2
##	20	20	17	20
##	ALDH7A1	ALDH9A1	ATF7IP	CNOT10
##	20	20	22	16
##	PARVA	PARVB	PFN3	TMSB4Y

##	1	3	4	2
##	CYP7B1	GK	PIPOX	SHMT1
##	20	20	6	15
##	GATM	SARDH	ELF3	FTCD
##	6	6	16	20
##	ME2	NDUFAF1	AIMP2	TNFRSF10D
##	6	9	7	20
##	GUK1	PARK7	SNAI2	MRPL43
##	20	22	10	24
##	MXRA5	NAA50	UBAC1	UBE2L3
##	11	5	5	20
##	UROD	GNPNAT1	RGS1	GLMN
##	3	17	4	6
##	TRPC3	ARHGAP24	BTBD17	CMIP
##	14	21	7	8
##	DRAP1	DRD1	DRD2	DRD3
##	9	3	14	14
##	EML1	F3	GRIK1	GRIK3
##	7	11	14	7
##	GRM4	GRM8	INPP5J	KCNJ2
##	14	14	10	25
##	MAP2K4	NAPG	SELE	SIGLEC10
##	10	8	5	7
##	TENM2	TRIO	ZBTB80S	ACYP1
##	11	23	22	20
##	BPGM	CHP1	DTNA	NPAT
##	20	9	7	6
##	PGK2	ENSG00000186076	CELSR2	DAO
##	6	20	17	6
##	SPOP	RAB9A	EDEM1	NOL10
##	22	13	13	15
##	ACADVL	APAF1	APOB	BAG4
##	1	24	1	1

##	EIF2AK2	HSPBP1	PHLDA1	SLC5A1
##	1	1	7	1
##	TINF2	ENSG00000215702	SLC35E2B	TIMM23
##	1	1	13	13
##	ME1	PCK1	PCK2	HDAC3
##	6	19	6	22
##	AFMID	ALDH1L1	KEAP1	MTFMT
##	4	14	15	9
##	MTHFD1L	TYMS	ABHD14A-ACY1	ARG1
##	9	20	13	6
##	ARG2	ODC1	SLC25A15	SLC35F6
##	14	20	9	20
##	CSMD1	EIF2AK3	GPRC5C	HDAC9
##	22	22	5	22
##	HSF4	IDI2	KIF13B	LPAR4
##	22	22	22	22
##	MTMR6	NKRF	OSR1	PCDH9
##	22	22	22	22
##	POU2F3	SNF8	TRAF3IP3	UTP6
##	22	19	22	22
##	VPS25	GAPDHS	ENO2	ACRC
##	25	22	2	1

	²⁰	²⁰	³	⁴
##	DPH2	GGT1	NDRG3	SYT16
##	13	9	22	19
##	ZNHIT3	CTRL	PSMD9	PSMF1
##	22	6	6	6
##	ENSG00000204261	KCNQ1	ELOVL1	MAGEA4
##	7	23	13	19
##	PITX1	PITX2	BRAF	PGGT1B
##	22	5	18	10
##	PRKCA	RASA2	RASGRP1	RASGRP3
##	18	10	10	10
##	RASGRP4	ANK1	ANK2	EXOC8
##	10	12	14	13
##	FANCA	FGFR1OP2	KIAA1468	MAT2B
##	1	10	14	14
##	PTOV1	PTP4A1	RAB3A	RAB3D
##	23	12	14	14
##	SPTBN5	SV2A	TES	AQR
##	14	14	24	11
##	ATP2A3	CLDN11	CLUAP1	DAB2
##	1	14	12	1
##	REPS1	S100A2	SEC14L5	TMOD2
##	1	24	13	5
##	PSME1	NTHL1	RAD18	ADAR
##	6	6	25	1
##	KIF17	NUP50	NXF3	SLC12A9
##	10	9	4	17
##	ARL8B	NCALD	SIRT2	MAP3K10
##	4	13	22	14
##	SLC35E1	SULT1E1	SYT9	STRADB
##	13	4	14	1
##	ENSG00000125695	AARS2	MEGF10	CADPS2
##	1	9	14	14

##	HSPA12A	ITSN2	SART3	SCAPER
##	14	3	21	11
##	TMEM132A	VWA8	AASDH	GNL1
##	7	20	25	15
##	COQ6	FIP1L1	GTF2B	PMPCA
##	25	15	22	25
##	ATG9A	RPF1	GATAD2A	HIST2H3A
##	15	15	25	25
##	HIST3H3	HSBP1P2	IL16	KCNJ16
##	25	22	25	25
##	KCNJ4	KCNJ8	L3MBTL1	LIN54
##	25	25	25	22
##	MYLPF	PARP10	HIST1H2AA	H2AFB2
##	22	25	25	25
##	HIST1H2BA	ZFR2	DEK	E2F4
##	25	25	25	22
##	HIRIP3	HIST1H1B	NCOR1	ENSG00000188223
##	25	25	22	22
##	ANKRD44	ASF1A	CCT8	C004
##	25	25	17	25
##	CSTB	DBNL	DLG3	ENY2
##	22	13	14	25

##	GADD45A	GOLGA4	HEATR1	HIST2H2AC
##	25	22	15	25
##	HMGB1P5	KDM2A	MON2	MYB
##	25	22	13	23
##	NAA16	NME2	PBLD	PDAP1
##	25	6	25	22
##	PHF20L1	POLR3B	PPIP5K1	PSME4
##	25	25	15	17
##	PTMA	RAD51B	RBM19	RFX2
##	25	12	15	25
##	SETD8	SFMBT1	SLC4A2	SMC1A
##	25	25	22	21
##	SUPT6H	TBL1X	TBP	TMED10
##	25	22	25	13
##	TOX	UTP14A	UTP18	WDR36
##	25	15	15	15
##	ZMAT2	ENSG00000215719	RAG2	SUPT7L
##	21	25	8	25
##	TADA2B	TAF6L	TAF9B	UBA3
##	25	25	25	25
##	AASDHPPPT	MDFI	C19orf60	CCDC120
##	7	7	10	7
##	TAP1	ZNF581	ZNF607	APIP
##	7	7	7	24
##	CASP10	CCDC33	CDCA3	DLGAP5
##	24	7	17	5
##	EDAR	ENKD1	ERN1	FAM120B
##	24	7	24	3
##	FATE1	FBF1	FBX028	FXR2
##	7	7	20	7
##	HINFP	HIVEP3	IKBIP1	ITPK1
##	13	4	24	10

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##	LNX1	LTBR	LZTS2	NECAP2
##	7	24	7	7
##	NUDT18	RFX3	SIAH2	SPATA2
##	7	10	20	9
##	TAB3	TCEANC	TCEB3B	THAP7
##	1	7	7	7
##	TNFRSF17	TNFRSF18	TNFRSF19	TNFRSF9
##	24	24	24	24
##	TRAF3IP2	TRIM37	TRPC4AP	UBXN11
##	23	7	7	3
##	ZBTB25	ZBTB43	ZFAND6	ZNF646
##	11	7	8	12
##	ENSG00000180882	ENSG00000185509	ENSG00000206439	ENSG00000205941
##	8	7	24	18
##	ENSG00000108516	COPE	SF3B1	MAN1A1
##	20	6	21	22
##	MAN1A2	MAN1B1	MAN1C1	PDE6D
##	17	24	15	21
##	BDP1	BRF1	GTF3A	GTF3C5
##	25	25	25	25
##	POLR3D	FRS3	GTF2H2C	LSM3
##	25	11	25	21
##	LSM7	TBC1D25	LHX3	PSMD5

##	21	22	22	6
##	PCOLCE	TFCP2	USP18	MICAL2
##	20	14	14	8
##	ENSG00000181784	PSPH	SDS	ROB04
##	21	25	9	11
##	DNMT3B	NCAPH	TRAF3IP1	AATF
##	22	8	7	15
##	BYSL	DAZAP2	DHX37	DIMT1
##	15	7	15	17
##	DNAJC19	GNB2L1	HIST1H2AG	HIST1H2AK
##	13	15	25	25
##	HIST2H4B	IMP4	KRI1	KYNU
##	25	15	15	19
##	LDOC1	MVD	NAT10	NOP9
##	7	15	15	15
##	RBBP8	STIP1	TFIP11	TSR1
##	22	6	21	15
##	UTP15	UTP20	WDR43	ENSG00000185057
##	15	15	15	15
##	NAA30	ATP6V1D	ATP6V1E1	CSTF3
##	25	6	6	15
##	CUL1	DCP1A	DHDH	EIF3CL
##	22	13	13	15
##	EIF4G3	ELP2	GRPEL1	HIPK3
##	15	25	25	22
##	IKBKAP	KIAA0368	MCM5	PAPOLA
##	17	6	25	21
##	PPP6C	PPP6R3	RIOK1	RPL31
##	17	2	15	2
##	SACM1L	SLC25A34	TBC1D8	TR0
##	13	13	13	9

##	TROAP	TUBB	WBSCR22	PEF1
##	4	13	15	7
##	RNASEH2B	TLK1	WEE1	ARID1A
##	22	24	18	22
##	GID8	LCMT1	MEIS3P2	PAN3
##	25	25	4	22
##	PANK4	PLK3	PPP2R5A	PPP2R5C
##	22	8	14	25
##	RAD51C	RAD9A	SLC9A6	TSSK1B
##	12	22	13	14
##	TTC39B	WASL	ZDHHC17	COPZ2
##	13	13	13	17
##	RCE1	AQP4	CABP1	CLTB
##	13	7	21	4
##	CSK	CSN3	DCK	DCTPP1
##	18	14	18	18
##	DVL1	DVL3	EIF2AK1	ELOF1
##	8	8	18	25
##	EPHB2	G3BP1	GLI3	HMGA2
##	18	18	25	1
##	HNRNPC	KIF1C	LEPROTL1	MAP3K4
##	21	14	18	18
##	MYCN	MYF5	NCF1	NTRK1
##	22	22	14	18

##	PARS2	PDP1	POLG	PRDX5
##	25	15	25	6
##	STON1-GTF2A1L	TGFBR1	ENSG00000137332	ENSG0000091436
##	22	18	18	18
##	ENSG00000215077	ATF4	ATXN1	BATF2
##	25	22	7	10
##	CALCOCO2	DAZ1	DAZ3	DAZL
##	7	7	7	7
##	EXD3	GPSM1	LM02	NDUF45
##	21	7	22	17
##	PLSCR1	TLE1	TOLLIP	WWP1
##	7	4	7	22
##	ZFAND2B	ENSG00000196435	ENSG00000214358	CLUH
##	11	8	7	6
##	MRPS9	DNAJA1	FANCD2	GSG2
##	15	21	17	17
##	KPNA4	MAGED1	MYO9A	P4HA1
##	17	4	17	17
##	PLOD3	RPP30	NMRK1	CORO7-PAM16
##	17	17	17	13
##	TIMM17B	ABCE1	ACTN2	AGTRAP
##	13	15	14	22
##	ATP5A1	ATXN2	ATXN7L3	CCBL2
##	18	4	14	9
##	CDH2	CLTC	CRNL1	DDX19B
##	14	13	21	9
##	DDX6	EIF3M	GNB1	GOLM1
##	2	19	14	8
##	GRIN2B	GSK3B	HBA1	ITGB1
##	14	18	11	11

##	ITGB5	LRP12	LSM2	MRPL27
##	11	9	21	15
##	NAF1	NEK2	NOC3L	NOP2
##	13	9	15	15
##	NSMAF	PACS1	PCID2	PFKP
##	16	1	21	6
##	PKLR	PLRG1	PMS2	PRKCD
##	6	21	22	18
##	PRKG1	PRPF19	PRPF6	PSMC5
##	14	21	17	6
##	PSMD3	PTN	RARS2	RASA3
##	17	4	6	10
##	RPL27AP	SF3A1	SF3B2	SIN3B
##	2	21	21	22
##	SLC27A6	SLC4A7	SNRPD3	THOC2
##	5	16	21	6
##	TIMM44	TMLHE	TNFRSF1A	TSC22D4
##	13	21	24	7
##	TUBB2A	VCL	ENSG00000172850	ENSG00000206412
##	4	24	21	15
##	TTBK1	CPSF4	DNAJB12	ELP4
##	5	25	1	25
##	FOLH1	HDAC6	HSPA1A	ING4
##	1	21	1	25

##	IRAK2	ITFG3	LMNA	MRPL44
##	1	1	17	1
##	NUCKS1	OPA1	PDIA5	PRMT5
##	1	1	1	2
##	RAP2B	RSL24D1	SLC16A1	UBAC2
##	1	15	1	1
##	YEATS4	ENSG00000212860	ENSG00000215292	ABLIM1
##	25	1	1	2
##	ABLIM3	ACTB	ACTR2	ATP6V1C1
##	2	14	2	6
##	CBR1	CDC16	CDC6	CEP70
##	2	13	25	7
##	CTSD	DLG2	EGR1	GATAD2B
##	13	14	25	25
##	GCN1L1	GSTM1	HIST1H1A	HIST1H3A
##	17	2	25	2
##	HIST1H3B	HIST2H3C	KAT5	LIN52
##	2	25	25	22
##	MATR3	MRPL36	MYBL1	MYH9
##	2	15	22	2
##	MYO1C	MYO1E	NACA	NAP1L4
##	2	13	6	25
##	PADI4	PHB	PHLPP2	PLD1
##	25	19	15	10
##	PPIAP22	PPP2R4	RACGAP1	RBL2
##	2	25	2	22
##	RTF1	SCIN	SMARCA5	SMU1
##	25	2	17	2
##	TMED5	TUBB2B	WDR1	ENSG00000206211
##	15	13	2	25

##	ENSG00000214082	ENSG00000215699	ENSG00000214605	ARF1
##	25	2	15	13
##	COQ10A	EBNA1BP2	GCLC	ISCA2
##	8	15	6	6
##	SRR	CAT	HAAO	WDR4
##	6	7	4	23
##	AEBP2	DPPA4	FAM107A	FAM208B
##	22	24	7	7
##	GNL3L	KRT15	MZF1	NRIP1
##	20	7	7	22
##	POLL	ZNF250	ZNF408	RPS6KA5
##	6	7	7	2
##	ARHGAP18	IN080E	KNSTRN	CTNNA2
##	4	25	4	14
##	FAM63B	SUGT1	BRAP	DDX17
##	12	14	20	21
##	KCNIP1	TP53RK	TRPT1	ATN1
##	21	6	21	7
##	CNBP	COX5A	FPGS	LRIF1
##	15	5	13	4
##	NEMF	ANAPC1	ANAPC2	DDX50
##	15	21	21	21
##	NOL8	PPIG	SLC5A7	RXRG
##	21	21	8	22
##	CD3EAP	KIAA1033	MAEA	PDCD2

##	1	22	20	1
##	CDK9	CTPS2	ENTPD1	ENTPD3
##	18	21	21	21
##	GUCY1B3	LIG1	PNPT1	SATB1
##	21	13	21	4
##	SNRPA	TCEB3	U2AF2	IQQAP2
##	21	21	21	17
##	NFKB1	NOV	PBDC1	PRPF4B
##	1	11	21	21
##	RASAL2	GFPT1	QARS	PSMB8
##	1	18	6	7
##	ENSG00000206296	ENSG00000206372	C16orf72	GPLD1
##	7	11	14	11
##	ISOC1	ENSG00000206232	ENSG00000206298	CHML
##	14	7	7	13
##	GORASP1	GORASP2	MICAL1	MICALL1
##	13	7	5	5
##	MTMR8	RAB11B	RABAC1	STX5
##	13	13	13	13
##	BNC2	KDM5A	LIN9	PAX5
##	22	25	22	22
##	PRDM2	PURA	RBBP9	SERPINB2
##	1	14	22	10
##	SNAPC1	SNAPC3	SUV39H1	USP4
##	25	25	22	22
##	ENSG00000180733	FAM175A	LIMS1	LMO4
##	22	22	1	22
##	ETV7	COMMD10	COMMID2	COMMID4
##	22	1	1	1

##	COMM7	DPF2	IRF1	ITGB3BP
##	1	1	5	4
##	KRIT1	PPP1R13L	PYCR2	TNIP2
##	23	22	14	1
##	TOMM40	CRELD1	EHMT2	MLST8
##	13	4	14	6
##	SH3YL1	WIZ	ENSG0000005189	GGACT
##	15	1	22	15
##	AES	ANKZF1	CDC27	COG3
##	19	13	13	13
##	CPA4	LPL	MAGEB2	MED7
##	15	10	2	21
##	METTL2A	PSTPIP1	RBFA	RNF185
##	13	15	16	1
##	RPL22L1	SFXN5	TRAF6	TRAPPC1
##	15	13	20	13
##	TRAPPC3	TRAPPC4	TRMT61A	WAS
##	13	13	15	21
##	WDR70	WHSC1L1	ENSG00000105972	ENSG00000104637
##	10	11	1	20
##	ENSG00000197149	TCF12	CYP4V2	MRPL39
##	15	22	7	15
##	OSGIN2	RTFDC1	TTC14	ATG12
##	1	5	8	7
##	ATP1A3	MCC	NETO2	PRKRA
##	14	20	19	1

##	RUNX2	SNX1	SPCS3	WIPF1
##	22	13	13	13
##	XBP1	CALR	FBLN2	HAP1
##	22	7	11	4
##	HIP1	HOXA9	HOXD12	LIMK1
##	4	22	4	18
##	NFKB2	PGLS	PTTG1	TMEM41B
##	1	25	19	16
##	CCNB2	ING2	NDN	PABPC4
##	25	25	22	1
##	PARN	PSAT1	SPG7	WRAP73
##	1	6	7	9
##	CTSZ	DRGX	LBX1	MAP3K8
##	19	8	19	1
##	MRI1	TUBG2	FRA10AC1	RASSF8
##	8	13	20	14
##	SMYD2	CAMSAP2	STAU2	ANAPC11
##	14	24	8	13
##	UFD1L	SERPINB1	BCOR	COMP
##	13	7	8	8
##	ASRGL1	CHCHD3	COX6B1	CSRP3
##	20	24	6	24
##	DLL1	ETNK1	HPS4	LTV1
##	22	15	20	18
##	MYOZ2	NDRG1	NDUFA4	PAX6
##	24	2	24	22
##	SDPR	SPARCL1	SP011	USP16
##	14	22	25	20

## ENSG00000167774	AMOTL1	APOD	C11orf49
## 6	21	16	1
## CCDC50	DTD1	EDEM2	FAM151B
## 4	16	15	14
## LIG3	MPDU1	PKNOX1	SNX6
## 16	5	22	7
## TEKT3	CRIM1	MOB3B	UBP1
## 6	7	20	4
## DNMT3A	BCAT1	MRPS15	NAA25
## 22	16	23	23
## PFAS	RASSF2	TREH	UMPS
## 23	22	13	23
## ENSG00000133511	MORF4L2	MRGBP	PSD3
## 23	25	25	12
## ERN2	SEL1L	XKR7	SLC445
## 13	13	4	24
## PIAS2	SP4	ZBTB7A	ATP6VOE1
## 22	22	22	20
## CXXC1	DHX29	LMX1B	PPIP5K2
## 22	10	22	13
## RABEPK	RBMX2	TUFT1	UBOX5
## 13	21	24	22
## ZCCHC7	PLA2G15	PCYT2	ASH2L
## 7	11	13	22
## HCFC2	AP3M2	HOMER2	PPP1R26
## 11	12	11	11

##	THADA	AFG3L2	LANCL3	NEGR1
##	24	13	15	15
##	SLC25A28	TSC1	MAFK	MROH7
##	13	14	22	6
##	NFASC	AGFG1	KRTAP4-12	ENSG00000212908
##	10	9	7	7
##	AATK	STK39	RELT	SLC12A6
##	24	7	17	9
##	ABAT	ALDH5A1	DPY19L2	DPY19L2P2
##	20	23	22	1
##	ENSG00000214221	ADH1A	ADH1B	ADH4
##	18	20	20	20
##	ADH7	ASMT	CYP2A13	CYP2A7
##	20	20	20	20
##	CYP2B6	CYP2F1	CYP4A11	CYP4F12
##	20	20	20	20
##	CYP4F8	CYP4X1	CYP4Z1	DZIP3
##	20	20	20	20
##	MOCS3	MSH5	ENSG0000096474	ARHGEF11
##	25	25	25	14
##	ARHGEF12	PDLIM4	RIMS2	ABC46
##	14	7	14	11
##	APOF	CACNA2D2	CETP	CFD
##	11	11	21	11
##	CFHR2	HPX	LECT1	MAP7D1
##	11	11	11	13
##	OBSL1	PDE1A	PRSS1	ROBO3
##	11	21	11	11

##	TNFRSF10C	UNC79	ENSG00000206340	ENSG00000204359
##	20	11	11	11
##	LPAR1	DAP3	EDA2R	LRRCC1
##	13	22	24	18
##	NOL3	PIDD	CLDN1	FZD1
##	24	24	6	8
##	PLEKHA2	ENSG00000214409	DRP2	ABC42
##	20	8	7	20
##	STARD9	STK36	ABCB1	HAX1
##	7	23	6	1
##	RNF2	DMBT1	FLOT1	GJA3
##	22	14	1	23
##	ITGB4	ITGB7	STOML3	ENSG00000206480
##	11	11	21	1
##	ABCB11	DGKD	IL1A	PKD2
##	13	10	9	1
##	PSAP	WSB1	FLRT3	INO80C
##	1	1	13	25
##	L3MBTL2	PELP1	SUMO2	ABCB10
##	4	22	4	16
##	ABCB4	ABCB5	ABCB6	GATA4
##	17	7	7	22
##	AKIRIN2	C2orf47	DAGLA	HPGDS
##	7	13	9	14
##	KLF13	LM01	NKX2-2	PUM1
##	22	22	24	24
##	TBX5	FTH1	FTMT	PPOX

##	20	4	12	4
##	ABCB8	ABCC1	USP32	OCRL
##	14	1	7	10
##	PI4KB	PLCD4	PLCE1	PLCZ1
##	23	10	10	10
##	ABCC2	PDZD3	AMBN	HLA-E
##	21	14	11	7
##	HLA-F	HLA-G	HTR3A	MBTPS1
##	7	7	1	5
##	SLC35D3	ENSG00000137403	ENSG00000206506	ENSG00000206493
##	13	7	7	7
##	ENSG00000211889	ENSG00000206509	ELMO1	ASIC3
##	10	7	24	14
##	SLC26A3	SLC9A3	ABCC8	ABCC9
##	12	14	22	14
##	WRB	AIRE	ALX1	CITED2
##	14	22	21	22
##	DACH1	GMEB2	KLF4	MAML1
##	22	16	22	22
##	NFE2L2	NMI	NPAS2	POU1F1
##	22	22	22	22
##	RARA	SERTAD2	TRERF1	ZNF639
##	22	22	22	14
##	ENSG00000153807	CCDC106	PHACTR3	PLEKHA4
##	22	4	19	10
##	RBM7	GATA6	NR1I3	ABCD1
##	7	22	8	9

##	ABCD3	MEST	CLCN3	PEX11B
##	9	10	14	1
##	PEX16	PEX26	PEX3	PXMP4
##	1	1	1	3
##	SLC25A17	UNC45B	AGPAT9	ZC4H2
##	11	12	14	12
##	EFHD1	ABCD4	TMEM66	ACD
##	13	11	3	1
##	GAL3ST4	GSE1	MSX2	FAM96B
##	11	2	22	19
##	RNASEL	ABHD4	ASPA	CSAD
##	10	13	20	16
##	DHODH	NUDT6	RIPK1	SRPR
##	18	22	24	13
##	TTI1	CCDC90B	ENSG00000212678	ENSG00000141342
##	13	4	4	4
##	MBD2	MBD3	MTA2	TFE3
##	7	4	2	20
##	CUL3	IGLON5	NTM	ENSG00000214186
##	22	22	22	22
##	EIF1	ERP44	WDR48	MKNK1
##	5	9	6	18
##	RRP36	IGDCC4	KRT6B	NCOA3
##	13	11	11	11
##	RNF14	ENSG00000204319	DHF1P1	MLF2
##	22	11	22	4
##	TOMM70A	ACTL6B	ST13P5	NFU1
##	13	25	20	7

##	CDA	DMC1	GLUD2	KCNAB1
##	20	25	6	14
##	OGG1	QPRT	TAMM41	ABCF1
##	25	7	4	3
##	FAM72A	FAM72D	FUND2	MRPS31
##	19	21	4	8
##	OFD1	UBE3B	XRN2	ENSG00000180958
##	4	6	15	15
##	ENSG00000206490	ENSG00000206410	C2orf76	CTU1
##	1	24	13	6
##	KIAA1549	PEX12	QRSL1	VPS45
##	9	1	8	13
##	ATG7	PTPRJ	ENSG00000206286	SATB2
##	13	10	13	21
##	RPE	ARHGEF7	CHURC1-FNTB	FLAD1
##	14	14	10	20
##	GLUD1	ISCU	LGI1	LIN7A
##	6	22	14	14
##	MPP2	PRDX6	RAB2A	RAB37
##	14	14	14	14
##	USP46	YWHAH	ENSG00000127359	RANBP9
##	6	14	13	22
##	RGPD6	SPPL2B	ALG8	ARF5
##	17	24	13	10
##	BANF1	BPI	CC2D1A	CLSPN
##	1	1	21	22

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##	CREG1	DAB1	DNASE2B	DNMT1
##	24	11	21	14
##	DONSON	DOPEY1	DTL	DTYMK
##	20	22	4	20
##	E2F1	EAR2	EHBP1	EIF1AD
##	22	8	22	13
##	ELOVL6	FOXA1	GOLT1B	GPS1
##	13	10	13	22
##	GSX1	HOXB1	ID2	IRF2BP2
##	23	22	22	14
##	ITFG1	JAGN1	LIPT1	LMNB1
##	13	24	13	10
##	MAGOHB	MIER1	MLXIP	MNDA
##	21	8	7	22
##	MOGAT1	MOGAT2	MRPL22	MRPL32
##	22	4	9	19
##	MRPS18B	MRPS35	MUC3A	NCAPD3
##	8	23	22	1
##	NDUFB7	NDUFS6	NDUFS7	NFE2L1
##	16	3	9	22
##	NKX2-4	NOP16	OSR2	PARD6G
##	11	14	22	14
##	PDE10A	PIGV	POR	PPIL4
##	21	22	13	22
##	PPP1R16A	PRDM9	PRRX1	QKI
##	7	24	22	7
##	RBL1	RBM22	SARM1	SETD1B
##	22	22	13	3
##	-----	-----	-----	-----

##	SGIA	SLC4A1AP	SMARCA1	SUA3U
##	4	10	21	8
##	SREBF1	ST7	STK10	SUV420H2
##	22	6	4	22
##	SYF2	TLE4	TMEM47	TPST1
##	4	22	18	16
##	TRHR	TRIT1	USE1	VPS37B
##	8	13	8	8
##	WASF3	WIPI2	ZDHHC6	ENSG00000154999
##	7	19	17	4
##	ENSG00000215120	ENSG00000137330	ENSG00000203624	MT-ATP6
##	25	20	21	5
##	SLC25A16	TIMM10	DCAF6	EPHA1
##	18	13	6	10
##	FN3K	INSL6	IRF7	KRT74
##	10	10	10	10
##	MRFAP1	PDX1	TADA1	VDR
##	20	10	25	22
##	RTEL1-TNFRSF6B	TMEM51	IRX4	SLC35D1
##	9	7	22	10
##	MOCS2	TBPL1	IDH3B	MBOAT2
##	12	10	17	12
##	ENTPD7	B4GALT1	JMJD6	PARN
##	13	4	9	14
##	SCG3	SIRT3	TCTEX1D2	AGER
##	3	2	7	7

##	GSTCD	ZFYVE26	LRRC8D	SMPD4
##	13	8	16	5
##	LCMT2	N6AMT1	PRMT2	PRMT3
##	20	20	20	20
##	PRMT6	ENSG00000152428	TSPAN13	HTR1E
##	20	23	21	24
##	C1orf216	BAZ2B	CPEB4	TAF3
##	9	22	22	25
##	XRCC2	ZZZ3	ENSG00000093100	EPC2
##	22	20	22	25
##	INO80D	PLSCR4	PON2	RGS20
##	25	25	20	14
##	ARID2	BRWD1	MEF2A	RFXAP
##	8	7	22	22
##	FRG1	PTCD3	RAB40C	CELSR3
##	22	4	24	4
##	CUL4B	ABCG1	ABCG4	ABCG5
##	4	17	20	11
##	ABCG8	GUF1	TRAPPC10	ACTR5
##	13	6	13	25
##	EPC1	GATS	RGS6	RNFT1
##	25	25	14	25
##	PNKD	DPM1	P4HA3	PYCR1
##	3	17	6	22
##	HTATIP2	CLPX	CNOT4	NDUFAF4
##	13	6	25	4
##	PHF12	PLEKHG5	BSN	PAXBP1
##	13	14	14	14
##	ARPC5L	ATP2B3	COQ9	COX11

##	14	14	12	13
##	CYP3A43	DIEXF	EIF1AY	ERMP1
##	13	18	15	12
##	FOXO3	HMOX1	HSD17B11	LARS2
##	25	19	12	13
##	REXO4	SUB1	TSEN34	ALG10
##	9	22	17	13
##	ALG10B	ALG9	DOLPP1	DPF1
##	13	13	14	4
##	ERBB3	KIAA0087	MAGT1	RER1
##	10	9	13	13
##	SIGIRR	UBQLN2	WSB2	C6orf15
##	5	22	13	13
##	ENSG00000206359	FAF2	CWC25	ASCL2
##	2	13	21	13
##	BAI2	C4orf17	CRY1	MAP1A
##	14	4	7	13
##	RASSF1	SIMC1	SLC25A29	VTI1A
##	24	25	13	13
##	AHSG	ALG12	ATG4B	CACNB1
##	11	13	13	14
##	CNOT6	COG6	DOHH	DRG2
##	23	13	6	13
##	FABP1	FGB	GRIN3A	LASP1
##	11	11	14	11

##	NPRL2	PARD3	PFKM	PIGG
##	13	23	14	13
##	RQCD1	RWDD1	SLC13A4	SQLE
##	13	13	13	13
##	TAB1	ZNF354A	ENSG00000179801	ENSG00000212915
##	1	14	13	14
##	TTC1	LOXL1	LOXL2	LOXL4
##	1	14	14	14
##	NOS3	AGMAT	AOC2	AOC3
##	14	20	20	20
##	OAZ1	OAZ2	SAT1	SAT2
##	24	5	4	20
##	SRM	ABHD14B	ECI1	ABHD16A
##	6	20	20	5
##	IFITM1	MIR4461	MT-ND3	MT-ND4
##	4	5	5	18
##	PTGS2	SPAG7	TMEM147	TMEM222
##	14	22	5	5
##	ENSG00000212872	ENSG00000212871	C1QTNF3	TMEM242
##	5	5	25	5
##	ENSG00000206403	PTGDS	PTGES	PTGIS
##	5	14	14	14
##	GPR107	HECTD1	SI	SLC25A25
##	25	25	20	3
##	NDOR1	ABHD5	PLN	ABHD8
##	4	5	14	4
##	ABI1	CYFIP2	DIAPH3	EPS8
##	14	14	14	1
##	EPS8L1	EPS8L2	EPS8L3	FAM109A
##	14	23	14	22

##	FNBP1	GAS7	KIAA1217	NEB
##	14	21	3	1
##	PACSIN2	PREX1	SHANK2	SPTA1
##	12	1	14	14
##	STX4	ENSG0000099882	NCKIPSD	IL6ST
##	13	14	4	10
##	CCDC53	CPNE1	CPNE4	ABI3
##	7	6	7	7
##	DNMMP	RAPH1	CRYL1	EPCAM
##	14	22	22	1
##	HOOK2	IL1RAPL1	MRPL20P1	MS4A5
##	7	1	9	1
##	PLEKHA6	RALGPS1	REM1	SHB
##	1	8	4	10
##	TANGO2	TEX28P1	TEX28P2	UBAP1
##	10	17	22	4
##	USP6NL	ENSG00000131586	FAM161B	ZW10
##	7	24	7	9
##	TNKS	APBB1IP	FBXL20	NCKAP1L
##	11	21	25	21
##	SF1	ING5	PHPT1	ENSG00000215693
##	21	4	20	4
##	CDKN2B	GABPA	METTL13	MKLN1
##	4	22	20	13

##	MOK	MYCBP	NCOA5	NDUFS8
##	9	4	24	14
##	NFYC	PAX3	PAX8	PDS5A
##	22	22	22	9
##	SIM1	SPAG9	TADA3	THOC7
##	22	1	25	5
##	UBE3C	ZBTB17	CYBA	CYBB
##	17	22	14	14
##	GAA	MYBPC3	NCF2	TRIM9
##	14	24	14	16
##	WASF1	ENSG00000179087	NPC2	CALCA
##	14	14	1	14
##	STYXL1	TMOD1	EHD1	EHD4
##	7	1	11	9
##	PACSIN1	POFUT1	SNX18	DLGAP3
##	14	22	5	14
##	LPHN1	LPHN2	PDSS2	RBPJ
##	14	14	14	22
##	ARHGAP29	FBN2	ITGA8	PDGFRA
##	20	10	11	10
##	RIT2	RAPGEF1	SLC14A2	STXBP4
##	14	10	5	13
##	SYT7	TXLNB	TXLNG	ARPC5
##	24	19	10	2
##	CRLF3	NAPSA	PLIN3	RAPSN
##	19	9	12	7
##	ARPC1B	FCHSD2	PI4K2B	SNX5
##	2	14	12	13
##	VIPR1	NLGN2	SGCD	SNX32
##	14	14	11	22
##	GDYN	TLG	GGHGA4	GLGML10

##	DDPN	WAC	ZCZMC1C	UVOVIIU
##	11	7	7	7
##	SFI1	CEP170P1	ERLIN1	TCL1B
##	12	7	1	10
##	TCL6	C19orf25	CCDC42	CCDC85C
##	19	7	21	7
##	DGCR6L	GLTSCR1L	SFR1	SYBU
##	7	7	21	14
##	ZNF490	CRIPAK	DSCAM	FOXL2
##	9	2	24	3
##	TBC1D5	RIN3	CAMK4	PRKX
##	24	1	14	14
##	CSNK1A1L	EREG	METTL18	BACH2
##	18	2	10	22
##	DUSP4	JUND	DGKB	DGKE
##	18	22	10	10
##	DGKI	DGKQ	INPP5K	IPMK
##	10	10	10	10
##	ITPKB	EFNB3	ZBTB12	PIP5K1B
##	23	14	15	10
##	VAV1	FAM98B	SLC44A4	BEGAIN
##	10	11	12	7
##	USHBP1	GC	ADORA2A	CLIC5
##	7	11	14	7

##	COL17A1	CSRP1	FXN	KCNA5
##	3	5	10	18
##	MAGI3	SSX2IP	ARNT	CPNE2
##	14	4	22	7
##	EMD	HEBP2	MAPK1IP1L	RNF115
##	1	4	7	12
##	SLC41A3	TIMM22	FBP2	APOH
##	2	13	14	11
##	DYSF	ENAM	LGALS13	PLA1A
##	14	11	8	20
##	PPM1B	S100A10	TRPV5	SSH1
##	1	4	8	14
##	TSPAN8	CHAMP1	ETV6	LEMD3
##	24	16	16	22
##	CATSPER1	DEF6	TRIM27	ZNF417
##	7	14	7	7
##	ENSG00000215641	C1orf65	CPNE7	FBXL18
##	7	7	21	7
##	PTBP2	RABL6	RHPN1	SYS1
##	14	7	7	7
##	TCL1A	ZNF426	NID2	C8G
##	7	7	11	11
##	NCR1	NCR3	SLC6A10P	SLC6A8
##	2	3	17	12
##	ENSG00000206321	ENSG00000206430	TESK1	SSH3
##	22	16	23	1
##	APPL1	ATG16L1	GDA	GRIK5
##	14	14	14	14
##	GRIN2C	KCNA1	KRT31	KRT34
##	14	14	23	14
##	KRT82	KRT85	NLGN1	NLGN3

##	16	3	1	14
##	S100A3	SEMA4C	SEMA4F	DLGAP2
##	6	14	10	14
##	DCTD	UNG	AGTR1	AMH
##	7	25	14	23
##	ANKS1B	AREG	BTC	CAMLG
##	7	22	10	20
##	CMTM8	DEGS1	DOK6	FAM189B
##	21	4	2	23
##	GRB10	LRSAM1	MAPK8IP2	MTX1
##	10	20	14	4
##	NUMBL	PITPNA	SCAMP1	SGSM2
##	7	24	10	7
##	SH2B1	SH2B3	SH2D2A	SH3BGRL
##	19	10	10	4
##	TGFA	TLR4	ENSG00000212874	C10orf12
##	14	22	5	14
##	E4F1	PRRC2B	REST	XAGE2
##	1	7	14	7
##	CCDC174	TSHR	PLEKH2	ADORA2B
##	4	14	7	2
##	ADRB2	ADRB3	CHRM1	CHRM3
##	14	14	14	14

##	CHRM5	GCG	GNB3	GNG11
##	21	14	14	14
##	GNG13	GNG3	GNG4	GNG5
##	14	14	14	14
##	GNG7	GNG8	HRH2	HTR4
##	14	14	14	2
##	HTR5A	HTR7	RGS18	RIC8B
##	14	23	14	1
##	ARHGEF18	DNAJC25	GNA12	GNGT1
##	14	14	14	14
##	KCNJ3	MTNR1A	OPRD1	ENSG00000213611
##	14	14	14	14
##	ADRB1	ATRN	EVA1C	LAX1
##	14	9	15	22
##	MERTK	SGCA	SIGLEC7	SPRY1
##	1	11	22	3
##	ENSG0000096141	DAB2IP	NANOS1	PDZK1
##	24	8	4	14
##	SEMA4B	GRIN3B	INADL	WDR5B
##	14	2	14	4
##	GGT3P	GPX4	GGT5	GGT7
##	9	9	9	9
##	GGTLC2	GOLGA3	GPX7	GSS
##	9	22	9	9
##	EZH2	SETD7	SUV39H2	ZMYN2
##	22	2	25	2
##	ZMYM3	ZNF219	PARP3	DIDO1
##	2	2	25	3
##	RBMXL1	CRYGC	FAIM	MAPKAPK3
##	7	14	6	18
##	POP7	BAX	CCS	FGFR10P
##	8	24	2	14

##	GLDC	RAB18	RCN1	TLR1
##	20	14	1	9
##	WARS2	BMP4	FAM46A	TGFB1
##	14	22	22	11
##	SRP19	PPP3CB	PPP3CC	PRKY
##	4	14	14	14
##	TRPC1	USH2A	KRT27	MASP1
##	14	2	21	11
##	MASP2	FGRF3	ALOX12	ALOX12B
##	11	10	10	7
##	BNIP3L	CTCF	FAT1	HCFC1
##	12	22	1	21
##	KPNA1	MRPS26	NARF	SFXN3
##	22	7	5	1
##	TOR1AIP1	BIRC6	KIF21A	LIN7B
##	23	14	14	14
##	MY07A	SYT5	GFI1B	ENSG00000134602
##	3	14	7	2
##	BRIP1	KIF1A	NAV2	POLRMT
##	22	21	23	19
##	SESTD1	ZC3H11A	ZNF84	CADM1
##	13	25	19	14

##	CRABP1	IDUA	KBTBD4	MORN2
##	6	14	23	5
##	TRIM41	MYLK2	MLPH	PRPH
##	18	14	5	7
##	GZMA	ZNF165	CD109	FAM60A
##	23	7	16	20
##	GFER	TMEM214	TONSL	TRIM24
##	22	22	19	22
##	ZMYM4	ADRA1A	CABIN1	ARHGDI
##	22	11	14	24
##	SESN1	SESN2	TAT	BDKRB2
##	9	12	24	14
##	KLRC1	LAIR1	PILRA	PCSK6
##	4	23	3	14
##	RIMS1	ZCCHC4	DENND5A	ERC1
##	14	21	16	12
##	MBTD1	SLC39A7	ENSG00000206288	OPN4
##	25	10	12	23
##	MTMR14	ECD	FAM83C	NLRP1
##	8	1	11	11
##	SMPDL3A	SPEF2	TXNDC2	CD9
##	11	11	11	11
##	COL26A1	APLP2	ARHGAP11A	CHST1
##	4	9	12	6
##	FAM189A2	ILDR2	LSR	PARD3B
##	1	15	3	22
##	PPFIBP2	SASH1	SCEL	SHROOM3
##	22	23	9	23
##	ST5	TRIM25	WDYHV1	ATP5G1
##	22	1	7	5
##	PRRT2	STX3	ZDHHC7	METTL21A
##	23	14	8	8
##	CPD	MT1DD1	DD1DD1	DD1DD1

	✓P✓	✓W✓D✓F✓L	✓F✓F✓I✓V✓I✓T✓	✓F✓F✓I✓V✓I✓Z✓D
##	2	2	2	23
##	SH2D4A	ENSG00000112498	ENSG00000206501	DOC2A
##	8	2	7	14
##	STX2	ALDOB	TNNT1	TNNT2
##	13	14	4	10
##	CDK5R1	FRMD6	MTHFS	NRBP1
##	14	16	20	7
##	SYT17	ZNF580	ENSG00000184902	RNF130
##	7	16	25	10
##	AK5	FGF10	GYS2	UGT1A6
##	16	10	14	1
##	UGT2A1	UGT2B17	UGT2B28	UGT2B4
##	3	3	3	3
##	UGT2B7	ENSG00000198277	ENSG00000197592	DYDC1
##	3	4	3	7
##	KLHL42	BCL2L11	DYNLT1	DYNLT3
##	7	24	14	4
##	PANK2	TOMM22	ARMCX2	CHD3
##	19	20	7	4
##	CRCT1	DIS3L2	FABP4	IVNS1ABP
##	4	6	5	16

##	KIF15	LOR	PKP1	PPHLN1
##	3	21	24	24
##	PPL	ROCK1	SDCCAG3	SIRT6
##	24	10	9	4
##	TCHP	TUBGCP4	UPP1	UPP2
##	7	7	20	6
##	ENSG00000106540	D2HGDH	PFN4	EML3
##	12	13	13	6
##	GREM1	NCOA2	PDK1	PNMA1
##	7	22	10	11
##	RPH3A	USP9X	HNRNPLL	PTPLAD1
##	14	14	2	9
##	OTUB1	CHERP	COG8	FMR1
##	22	21	13	14
##	INA	ENSG00000174622	AGR2	NSF
##	14	21	4	6
##	PRR13	PRSS23	PTPRN	SRPK2
##	7	22	14	13
##	AHCY	CTH	GEMIN2	HARS2
##	6	6	21	20
##	TLE2	WDR26	ABO	FUT2
##	4	4	25	20
##	ABR	GNA14	ACAA1	ALDH6A1
##	10	14	20	20
##	HSD17B10	AOX1	TRMT10C	MCEE
##	20	20	19	21
##	MMADHC	ENSG00000204763	FASN	PRKAG1
##	20	20	11	1
##	FLI1	FAM96A	GAS8	MRPL24
##	22	13	21	12
##	RPAP1	SLFN11	TMEM110	ENSG00000197025
##	22	10	2	17
##	ACSS1	PDK2	CLU	CP

##	20	16	11	11
##	FGA	FN1	GNAI2	KRT16
##	11	11	1	11
##	KRT6A	PAPPA	SCAF1	SETDB2
##	11	11	11	11
##	SLC48A1	SLC6A9	RSU1	ENSG00000188364
##	11	11	1	1
##	ACACB	DDX39B	ESYT3	MLX
##	6	2	6	8
##	NPEPPS	SMC3	SOD2	TMEM184C
##	6	9	6	6
##	ENSG00000206324	CTDSPL	NMT2	ACTL6A
##	6	10	24	17
##	ACTR10	ACTR1B	ADAM28	AFF4
##	25	4	18	18
##	AURKA	BRD4	CDK5	CLIC4
##	18	18	18	18
##	CSNK1A1	DDR1	DPAGT1	EPB41L2
##	18	18	14	14
##	FAM83A	FMN2	HPCAL1	HRNR
##	18	19	14	18

##	IMPACT	ITM2B	KLHL17	LAPTM5
##	8	14	14	14
##	LONRF3	MAP2K3	MARCKS	MBNL1
##	7	14	14	22
##	MTA1	NCK2	NDUFV2	NEFL
##	22	18	14	14
##	NUDC	P2RX7	PAICS	PARVG
##	14	14	14	2
##	PBRM1	PBX2	PCSK1N	PKMYT1
##	8	22	14	18
##	PLXNA1	PRKCQ	PTPLA	PYGM
##	14	18	13	14
##	RAB35	RAB3B	RBX1	RPS6KA1
##	10	14	22	18
##	SEC16A	SH3GL1	SPATA2L	SPIRE1
##	18	14	14	22
##	SPTB	STAU1	SYN2	TMEM55B
##	14	14	14	5
##	TMX1	TNIK	TPD52L2	VASP
##	18	18	14	21
##	VSNL1	VWA9	ENSG00000206315	ENSG00000186031
##	14	15	22	14
##	ARFIP1	OCIAD1	PLEKHA8	SRPK3
##	22	23	9	21
##	ENSG00000206580	CD93	DBR1	MRPL11
##	5	11	13	13
##	ARL4C	BLMH	C6orf211	GDAP1
##	14	13	21	25
##	HID1	ATG5	BBX	ENSG00000206445
##	22	20	12	21
##	ENSG00000206334	CARHSP1	CCP110	CRHR1
##	20	14	15	14
##	EMP3	MYOG	NME4	OBSCN
##	14	22	4	14

##	PPEF2	TCF4	TRPV1	UNC13A
##	11	22	14	14
##	ADCYAP1R1	CAMK2D	FKBP8	KCNN2
##	14	18	7	14
##	OPRM1	PDE1C	PTH2R	UNC13B
##	14	21	14	14
##	CTNS	COX17P1	VPS26B	AP3B2
##	5	11	13	24
##	ARMCX3	C10orf88	DNAJC6	GGA2
##	25	2	16	7
##	PRDM16	BHLHE22	RGS2	RGS4
##	19	12	14	14
##	API5	CHTOP	DDX20	DDX39A
##	4	9	17	2
##	DNAJC14	ELL2	H3F3AP6	HIPK2
##	20	21	2	22
##	MED13	MED18	MED19	MED23
##	21	21	21	21
##	MED26	MED29	NONO	PTBP1
##	21	21	17	21

##	RBBP7	RNPS1	SARNP	SMN2
##	2	21	3	21
##	STRN4	TDG	AGO1	AGO2
##	8	22	16	19
##	ATP5D	EDC3	HDGFL1	HELZ2
##	5	23	8	22
##	KMT2B	LPAR2	MAPK8IP3	ORAI3
##	22	22	22	22
##	OSBPL1A	PANX3	PPAP2B	SENP7
##	22	22	22	22
##	SMO	SNRPE	TAPT1	TBRG1
##	22	21	22	4
##	TMEM131	WNK4	WNT16	ZNF277
##	7	22	22	16
##	ZNF443	BLM	BRCA2	NDC80
##	22	22	22	22
##	RHEB	TRIP13	ENSG00000197065	ALKB4
##	14	7	7	23
##	ENSG00000204210	ENSG00000206383	ENSG00000206274	ALG6
##	7	11	19	13
##	DPM2	DPM3	PPTC7	PRUNE
##	13	3	6	6
##	TCP11L2	CKMT2	AKAP8	AP4E1
##	5	4	17	11
##	DNAJB6	GTF2I	HAUS7	JARID2
##	17	17	21	11
##	KIAA1967	MY05C	MY09B	NDUFAB1
##	17	17	17	13
##	NDUFS1	PUS3	RPN2	SETD4
##	17	25	17	13
##	TMEM30A	TRMT1L	XPO1	ENSG00000196540
##	13	17	17	11
##	EVPL	GIT2	USP11	MNT
##	20	14	1	1
##	TMEM106A	ARCIN1	TTMPO	VPS16

##	25	6	11	13
##	VPS33A	GFM2	PFKFB2	PFKFB3
##	13	22	14	14
##	PFKFB4	NME3	NME5	NME6
##	14	25	25	25
##	NME7	ENSG00000103200	RRN3P2	TIMM13
##	21	25	19	25
##	POU2F1	SNAPC2	SNAPC4	SNAPC5
##	22	25	25	25
##	ZNF143	KANSL3	PEMT	LZTS1
##	25	21	13	25
##	POLR3E	STC2	ALS2	ANKRD28
##	25	4	12	1
##	ATG13	FSTL1	HMOX2	MFAP3
##	12	12	12	12
##	MIOX	PALM	UBE2R2	FHOD3
##	12	12	13	25
##	RBM45	CMYA5	BECN1	DNA2
##	16	24	13	25

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##	ESRB	RORA	THAP11	ENSG00000183519
##	22	22	3	6
##	RBM15B	ENSG00000206195	ENSG00000206193	DFFB
##	22	21	7	24
##	AKR1A1	AMY1B	AMY1C	MOB1B
##	6	24	4	13
##	PHKB	PIM2	ENSG00000196318	ENSG00000197839
##	14	5	14	14
##	SREK1IP1	TXNRD1	PDE9A	CCDC114
##	22	4	21	20
##	CDCA5	FEZ1	HSD17B4	MAN2C1
##	14	4	4	25
##	MXI1	REC8	RPGR	SMC1B
##	16	9	24	9
##	STAG1	STAG2	SYCP3	WAPAL
##	9	9	24	9
##	RAB4A	ENSG00000100101	NR2C1	THOC1
##	13	9	22	21
##	TD02	TM9SF3	GCSH	SMIM4
##	20	13	4	10
##	ADTRP	AIG1	ASCL1	PHYH
##	20	7	22	7
##	ARHGEF6	ACSM1	DMXL2	EPB41L5
##	14	20	22	7
##	MADD	PLIN2	PKP4	AHSA2
##	22	13	24	22
##	TTLL4	ENSG00000173959	ACAP3	SLC35G2
##	24	13	16	10
##	SEMA3F	ALAS2	BCAT2	G3BP2
##	10	15	20	16
##	IVD	MYEF2	PITRM1	TROVE2
##	20	20	6	20
##	RUNDG3A	ZNF547	SDHC	RPS6KC1
##	7	7	20	4
##	KIR2DL1	ENSG00000183291	SOX5	ACVR1C
...	-	-	-	-

##	6	20	13	22
##	CUEDC1	POT1	ACE	ACER3
##	22	1	10	13
##	PPAP2C	SGPP1	SGPP2	FOXP4
##	10	13	13	21
##	AGPAT2	CDS1	CEL	DGAT1
##	10	23	10	10
##	LIPF	PNLIP	PNLIPRP1	PNLIPRP2
##	10	10	10	10
##	AGPAT3	AGPAT5	AGPAT6	TMBIM6
##	10	10	10	24
##	PHOSPHO1	PCYT1B	KLHL26	CAST
##	6	20	11	24
##	KATNAL1	SLC35B1	TNFAIP8	ACKR2
##	16	22	12	8
##	CCL11	CCL14	CCL21	CCL25
##	8	8	8	8
##	CCL28	CCL3	CCL3L1	CCL4
##	8	8	8	8

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##	CCL5	CCL8	ENSG00000205017	CCR2
##	8	8	8	8
##	CXCR3	CCR3	CCR10	CXCL13
##	8	8	8	8
##	IGFBP7	SRGN	CCR8	IL8
##	10	4	9	8
##	ACKR4	PF4	HERC5	ACMSD
##	8	8	22	22
##	MAGEA11	AKR1C3	BEX2	BIRC3
##	7	14	7	24
##	C18orf54	CEP76	DNAJC10	ENOX2
##	3	7	7	7
##	FAM156A	FAM156B	IFNA6	IL11
##	14	24	10	10
##	KIAA0408	MGME1	MKD3	NDUFB9
##	7	19	18	4
##	NSUN4	OTUB2	PRKRIP1	RADIL
##	20	22	10	7
##	SNX20	SNX7	TCEA2	TCF25
##	4	5	7	15
##	TEX37	TMEM123	TRMT1	ZSWIM2
##	7	1	24	1
##	ENSG00000112448	AC01	ENSG00000215820	TRIM2
##	7	19	19	19
##	TMEM170A	ACOT1	ACOT13	ENSG00000206217
##	11	24	5	1
##	PDE2A	PDE4B	PDE6G	IGF2BP3
##	21	11	21	3
##	TRIM56	ENSG00000198904	MEIS2	APEX1
##	22	12	22	1
##	BOK	C10orf118	COMT	CREBL2
##	24	20	20	19
##	CRYZ	CSDE1	FKBP3	GCLM
##	6	24	6	6
##	GLOD4	KATNAL2	KIF4A	MID1IP1
##	5	20	3	11

##	MTIF2	PDCD10	RAB21	RNMTL1
##	10	19	12	7
##	SAR1A	STOML2	TSFM	UBE2M
##	20	20	5	6
##	XPR1	ENSG00000096238	ACOT2	RAD54L2
##	7	20	21	7
##	ACOT4	GMCL1	DTNB	ENSG00000149397
##	21	25	7	20
##	ARHGAP39	HMG20A	KIF5A	PRTFDC1
##	7	7	23	5
##	SNTA1	SNTB1	SNTG1	SNTG2
##	14	14	17	20
##	CDKL1	GATAD1	IFT46	NOTCH2
##	22	10	12	22
##	ENSG00000112049	COLEC12	ADAM17	CAPN9
##	22	18	24	14
##	ENKUR	GSC	RAB34	NPC1
##	25	22	22	22

##	CYP39A1	FNBP1L	ACP6	ADH6
##	20	14	20	20
##	DHCR7	UROC1	PAPSS2	NMNAT1
##	20	22	20	20
##	NMNAT2	NMNAT3	ACP2	ACPT
##	20	20	20	20
##	ACP5	GPC4	PON3	CYP19A1
##	20	20	20	20
##	CYP1A1	CYP1A2	CYP1B1	CYP2C18
##	20	20	20	20
##	CYP2C19	CYP2C8	CYP2E1	CYP2J2
##	20	20	20	20
##	CYP2S1	CYP3A7	CYP4B1	CYP4F11
##	20	20	20	20
##	FAM101B	GNE	PMAIP1	ENSG00000215700
##	5	22	24	22
##	ACPP	APOL1	TBC1D19	CD40LG
##	11	11	11	11
##	IGHG4	ELF4	HBZ	HLA-DRA
##	1	10	7	7
##	ENSG00000206243	ACR	ZP2	ZP3
##	7	5	11	15
##	HES5	RAB3IP	TRAK2	SYPL1
##	24	4	25	3
##	PJA1	AMFR	NDUFS3	RNF144B
##	20	20	17	20
##	RNF25	SMC2	TRIM11	CLOCK
##	20	17	20	22
##	NAP1L2	NOTCH3	ATP4B	ATP6VOA2
##	14	22	14	7
##	WIPI1	AXIN2	SPATA6L	FCGR1
##	23	8	19	20
##	CHRM2	ENSG00000215697	TBXA2R	DNASE1
##	14	13	14	21
##	C7orf50	NKX3-1	TOPORS	CHAF1A
##	3	10	24	23
##	LEFTY2	SS18	TGF3	ADAM12

##	11	25	22	11
##	ANG	FIGN1	MAPKBP1	PALLD
##	10	19	10	14
##	TRPC4	TTC8	ULK2	WDR62
##	14	9	22	4
##	IFT88	RFXANK	SPON2	THAP4
##	5	22	25	15
##	RBM18	RNF4	SPDEF	ZMIZ1
##	10	22	12	22
##	CDH11	PAPPA2	LBR	PRPF39
##	19	22	13	25
##	CCDC13-AS1	MRPS18A	AURKAIP1	CHFR
##	7	10	18	20
##	CSNK1G2	TACC1	TDRD7	TPX2
##	18	22	22	16
##	ENSG00000215725	PRKAR2B	BCL2L2	TACO1
##	6	14	24	16

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##	E2F2	C7orf25	SRBD1	TCERG1
##	22	14	20	21
##	ADNP	GEM	BIRC7	PSIP1
##	11	9	24	6
##	NTAN1	SCHIP1	ENSG00000185068	FZR1
##	22	18	18	13
##	PDE8A	SKIL	ARHGAP40	FGD3
##	21	22	13	3
##	MCF2L	ENSG00000174115	ARVCF	BOC
##	20	8	1	5
##	CDH4	CDON	BARD1	CCNB3
##	25	20	4	22
##	CDKN3	CKS1B	CRBN	DAPK1
##	18	22	16	24
##	ECT2	GADD45B	MEF2C	PBK
##	23	22	22	22
##	PPP2R5E	RAB5B	SPAG5	STMN2
##	10	7	3	14
##	TK1	CABLES2	CCNJ	CDK5RAP1
##	4	3	22	14
##	DCX	EMX2	HOXA6	LMTK2
##	20	22	22	19
##	NR1H3	NUBP2	ST14	SPOCD1
##	22	9	22	18
##	THRA	ZNF330	HEXIM1	NR2E3
##	22	12	21	22
##	NUFIP1	ZMYM6	TSPAN3	TSPAN4
##	3	21	8	11
##	COG1	BGN	BMP1	NID1
##	13	11	11	11
##	TMPRSS6	HABP2	SAA1	APOBEC1
##	10	11	11	21
##	CRYBA1	ITGA10	ITGA11	ITGA9
##	16	11	11	11
##	ITGAD	ITGAM	ITGAX	ITGB8
##	11	11	11	11
##	ERF	GJA1	HMGFB2	NFATC3
...

##	18	14	22	14
##	SYT11	C14orf1	TVP23B	SCLY
##	6	4	13	14
##	AGTPBP1	COX4I2	CYB5A	CYB5R1
##	19	3	24	13
##	CYB5R3	FDX1	UQCRC1	GPS2
##	16	22	5	22
##	NEURL4	RB1CC1	BEND5	COL11A1
##	19	19	18	9
##	COL5A2	TM4SF1	SCAF4	CYP8B1
##	18	18	21	19
##	GRTP1	CLIC3	DCUN1D3	AOC1
##	13	18	12	20
##	EED	EEF1A2	UQCR10	NDUFB8
##	22	1	5	12
##	AKAP17A	PGM3	TRIB2	BEND7
##	8	7	22	6

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##	CREB3	ADORA1	EFNA5	FAM188B
##	22	14	18	7
##	KALRN	SDCBP	HDHD3	LMLN
##	7	14	4	9
##	RSPH3	DOT1L	RNF220	AHNAK
##	22	13	22	17
##	ARHGDIB	CAPN6	ICAM2	ICAM3
##	24	18	24	24
##	S100P	SELL	SELP	TBC1D10A
##	20	24	11	1
##	TYW3	ENSG00000204325	ENSG00000188126	CDKAL1
##	12	7	15	22
##	MINPP1	NAGS	PDE7B	ARHGEF1
##	10	20	21	14
##	CD14	DRD5	S1PR4	ADORA3
##	11	14	6	7
##	C5AR1	CNR1	CXCR1	CXCR5
##	8	1	14	8
##	EDNRA	EYA2	FPR1	GPSM2
##	14	16	13	14
##	ITM2C	LGALS4	LHCGR	LPAR3
##	14	1	16	1
##	MTNR1B	NGB	RGS12	RGS5
##	14	1	14	14
##	RIC8A	SNX9	GRID2	AKAP11
##	14	1	14	14
##	AKT1	AXIN1	EPM2A	FRAT1
##	14	14	14	7
##	FRAT2	LRP6	MITF	MYOCD
##	8	8	22	3
##	NPY4R	QPCTL	RCAN1	RGS22
##	16	13	19	15
##	SGK3	TPPP	WNT4	DEDD2
##	21	20	8	24
##	ANTXR1	HDAC10	HOPX	IFRD1
##	3	23	13	20
##	MBD3L1	PHF21A	RBP1	SETD1A
##	22	2	12	22

##	SMYD1	TRUB2	HR	NCAN
##	9	3	22	4
##	CRMP1	ENSG00000215173	DOCK4	CLCF1
##	4	21	10	10
##	CSF2	CSF3	CTF1	EPO
##	10	10	10	10
##	IFNA10	IFNA16	IFNA2	IFNA21
##	10	10	10	10
##	IFNA5	IFNA8	IFNB1	IFNE
##	10	10	10	10
##	IFNG	IFNK	IFNL1	IFNL2
##	10	10	10	10
##	IFNL3	IFNW1	IL12A	IL12B
##	10	10	10	10
##	IL15	IL19	IL20	IL21
##	10	10	10	10

##	IL22	IL23A	IL24	IL26
##	10	10	10	10
##	IL3	IL4	IL5	IL6
##	10	10	10	10
##	IL7	IL9	LEP	LIF
##	10	10	10	10
##	OSM	PRL	TPO	TSLP
##	10	10	10	10
##	ENSG00000147877	ENSG00000120247	ENSG00000186809	EGLN1
##	10	10	10	23
##	ATP2A1	STON2	C1orf174	CBX8
##	23	19	3	22
##	FAM135B	FAM173A	GSTO1	HNRNPH3
##	5	4	9	9
##	IK	KSR2	MAD2L1BP	NAP1L5
##	7	10	4	4
##	NDUFA4L2	OGFOD2	SNAPIN	TEL02
##	4	23	7	22
##	ZEB1	ENSG00000206282	ENSG00000206210	ANKRD13A
##	22	11	4	4
##	EPN2	HEY1	HEYL	TNFAIP3
##	13	22	22	14
##	TOM1L2	USP13	SLC35A2	ENSG00000206215
##	3	20	7	22
##	MPP5	ISL1	METTL15	TNKS2
##	14	22	1	22
##	CECR2	DHH	KSR1	TRIB1
##	9	22	1	14
##	MAP3K6	PPM1A	SYT12	DUSP16
##	24	14	1	18
##	MAP4K1	CARM1	FTSJ2	PRMT7
##	24	20	20	20
##	PRMT8	CELF1	FOXN2	TAGLN3
##	20	7	20	22
##	MCM3AP	MCMBP	MBIP	MCM8
##	22	21	7	17
##	JAG1	NRXN3	PVRL1	NPPC
##	22	14	4	3
##	ARHGEF15	RAB4B-EGLN2	ENSG00000134133	EMX1

##	3	22	1	22
##	GPR183	HIF1A	LRRC18	PCGF6
##	18	22	2	22
##	TOX4	ZBTB33	IL1RL1	TLR5
##	22	22	20	10
##	CCR5	CXCR4	FAM83F	MEN1
##	8	10	1	25
##	MYL9	MYOM2	OVGP1	TRPM7
##	23	16	15	11
##	ENSG00000205918	CD3E	PKN2	WIPF2
##	13	10	24	21
##	SP110	MTMR2	NEPH	ATF6B
##	11	20	14	2
##	LOXL3	PUM2	CNIH4	GABARAP
##	14	7	13	19

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##	GABBR2	BDNF	COL9A1	COL9A2
##	11	3	15	24
##	COL9A3	JAG2	RTN4R	VPS53
##	19	22	8	13
##	JAM3	PNMA6B	PNMAL1	PVRL3
##	11	10	23	23
##	FERMT2	CCDC88B	HOXB8	CARD11
##	4	22	22	18
##	CDAN1	SPTY2D1	DEFA1	GPRASP1
##	18	18	14	4
##	SYNDIG1	ATP6VOA4	DES	GINS1
##	21	14	14	25
##	CCDC101	FAM53B	KIAA0930	PDZD11
##	23	23	23	23
##	SHCBP1	NRAS	RASD2	PIP5KL1
##	23	10	22	10
##	CCNE2	NUDT7	STEAP3	HOXA1
##	22	12	3	7
##	ALOX15	ALOX15B	CDS2	DGKH
##	10	10	10	10
##	WDR6	NRP1	PLXNB1	RHOD
##	17	10	14	22
##	ENSG00000172070	CCDC88A	CISD1	F10
##	10	7	14	11
##	LIPE	NXT1	PLP2	PREP
##	14	16	4	4
##	SLC25A10	SLC25A5	SLC2A1	TARSL2
##	7	1	9	8
##	UFM1	VAMP3	C2orf88	PALM2-AKAP2
##	22	13	11	19
##	ADD3	AKAP12	AVPR1A	CALY
##	2	23	14	18
##	CASR	DLX3	EDF1	F11R
##	24	8	22	20
##	GABRR2	GNA15	GPM6A	GRIA1
##	10	14	18	14
##	GRM1	HAND2	HES1	HSPB8
##	14	22	22	1
##	KCNE1	KCNQ2	MGMT	NUMB
##	"	"	"	"

##	4	14	22	22
##	PAM	POLB	PTGIR	RHO
##	1	7	21	14
##	SCTR	SDC4	SPAG1	STXBP3
##	14	11	21	14
##	TEP1	TNNI3 ENSG00000206441		ADRA2A
##	12	24	7	14
##	CD34	GNAZ	KCNJ1	PLSCR3
##	13	14	1	22
##	RIPK4	TAGLN	SLC4A3	FOXA2
##	11	22	5	22
##	GPX8	MSRB3	TTC38	APOBEC3F
##	21	11	5	10
##	CAAP1	CDH10	CGA	COX6C
##	19	1	16	3

##	EVA1A	GLYAT	HSPBAP1	PTPRB
##	4	4	5	14
##	SDC1	SPIN1	TAC3	TAF1D
##	11	9	4	24
##	CHMP2A	DNAJC5	EMC4	RAB11FIP1
##	13	13	8	13
##	RAB11FIP3	RAB11FIP5	SYTL3	SYTL5
##	9	7	7	14
##	FAM71C	CBR3	GNPAT	CHM
##	1	5	20	14
##	RPH3AL	KIF20A	MTG1	NCOA7
##	24	16	13	13
##	NELFE	RAP1GDS1	TLR2 ENSG00000206268	
##	21	1	4	21
##	DOCK1	DDI1	GLIPR2	ABTB1
##	10	17	10	22
##	CAND1	COMM1	CUL4A	DARS2
##	22	1	4	20
##	DET1	EFTUD1	FBXO11	FBXO18
##	14	16	20	20
##	RFWD2	ZC3HC1	CARS	RANGRF
##	4	24	25	16
##	ARHGEF3	DAAM2	WBP5	PELI2
##	24	7	9	24
##	TRAM1	UBALD1	C15orf39	SAMD8
##	4	18	14	18
##	SEC62	SETBP1	BLNK	MANF
##	13	14	10	8
##	RASGEF1B	TMEM8B	PIM1	IKZF1
##	14	14	22	22
##	IKZF3	IKZF4	MTHFSD	RFX5
##	22	22	4	22
##	TCAIM	ULK1	CUL7	FBXL14
##	8	22	11	9
##	FBXL4	FBXL8	FBXO16	FBXO2
##	3	8	10	11
##	FBXO34	FBXO41	FBXO45	FBXO7
##	23	1	22	4
##	FBXW2	FBXW5	AFF1	CXXC5
##	8	7	18	22

##	EXPH5	KIAA0226	KMT2D	MGAT1
##	2	3	3	4
##	PIR	RNF123	SMAD6	UBA6
##	22	22	22	17
##	BAZ1A	BAZ2A	CHRAC1	RSF1
##	13	17	16	16
##	CNTN3	SASH3	TET2	CCDC43
##	20	13	18	18
##	NR1H4	ESPL1	INSM1	MSL1
##	22	19	22	10
##	COX7A1	NCAM1	IQSEC1	ZBTB3
##	10	11	6	23
##	KIF2B	UPF3B	EXOSC7	SYN3
##	4	4	15	14

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##	NRXN1	TAF8	DR1	EVX1
##	14	25	25	22
##	FOXF2	POU3F2	TAF1L	TEAD1
##	25	10	5	22
##	TRAM2	TRIP4	ZNF76	CHAC2
##	24	22	4	6
##	PPRC1	BTBD2	CDC42EP4	DAPK2
##	22	4	9	18
##	DUSP13	FBXL12	FBXO24	KLHL1
##	18	14	19	8
##	NKIRAS1	NOXO1	PREB	RAB33B
##	3	1	16	8
##	RHOH	RNF146	RRH	RTKN
##	4	18	21	10
##	STK35	TGFB3	TGFBR3	TRAP1
##	22	11	11	22
##	TSSK3	UBD	USP45	WDR13
##	18	21	6	4
##	WWC1	ENSG00000206513	ENSG00000206468	FAM160A2
##	4	13	23	19
##	RBM4B	CLDN16	CLDN5	CLDN6
##	22	18	1	5
##	CLDN8	GJA8	GJB3	GJC1
##	11	1	2	16
##	KIRREL	CCL18	CELF3	FXYD6
##	7	4	4	4
##	HES6	HHEX	PCDHA4	SIX2
##	9	22	4	11
##	SIX6	UTY	AVEN	CLASP1
##	22	4	7	12
##	GCFC2	RBM3	TPMT	NKX6-1
##	11	24	25	3
##	PSENEN	ARL6IP5	PLEKHG2	RHOBTB2
##	3	1	5	22
##	UBR7	METTL9	CDIPT	DAP
##	7	21	10	24
##	IP08	MOAP1	TUBA3D	TUBB6
##	7	24	1	8
##	ENSG00000204490	ENSG00000206437	ENSG00000204487	ENSG00000204496
##	24	24	24	24
##	ENSG00000206327	ENSG00000206284	CNKS2	HS2ST1

##	24	23	14	16
##	MYT1L	PDE4DIP	PPP1R13B	PRPSAP1
##	20	23	11	7
##	PTPN3	MAL2	TMED4	TPD52L1
##	23	14	1	14
##	TPD52L3	VAMP7	ID3	NGFRAP1
##	18	13	22	24
##	RASSF7	TXNIP	FAM127A	GKAP1
##	20	22	13	7
##	SMCR7	KDM5C	DMRTB1	ERMAP
##	6	25	20	8
##	LPP	BRSK2	DPYSL2	SETD6
##	22	8	4	25

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##	ZAP70	TACC2	ZNF33A	ZNF567
##	10	22	9	18
##	SVOPL	DCTN3	MLKL	NAA35
##	16	5	22	25
##	NADK	SLC25A26	SURF1	PAK3
##	20	25	5	14
##	NKX2-3	ST3GAL4	AKTIP	CDR2
##	1	12	9	20
##	TULP4	ETV3	GEMIN6	PPP4R2
##	23	4	21	11
##	MTF2	AGT	C11orf16	C19orf57
##	22	11	3	7
##	CD177	CEACAM5	ELAVL4	GNPDA1
##	22	2	21	11
##	LILRA3	MYO1F	NBPF3	RASL11B
##	6	4	8	19
##	SALL2	TULP2	YY1AP1	FANCE
##	25	11	9	20
##	FNDC3A	PAXIP1	SHPRH	SUMF2
##	16	14	2	4
##	GLG1	USF1	C3orf33	NR2F2
##	1	22	13	22
##	ENSG00000206115	HDAC11	MIPEP	RBAK
##	10	10	9	4
##	ZNF106	ZNF362	ENSG00000206407	IRAK4
##	4	4	4	20
##	ARHGAP26	HOXA3	NISCH	OR10H2
##	24	24	5	24
##	PATZ1	PINK1	PTPN1	PTPRK
##	24	24	10	10
##	ENSG00000198013	ARL5A	C21orf2	POMP
##	9	22	9	12
##	PRKD3	NODAL	CCDC89	KCTD20
##	22	11	1	21
##	LSP1	SH3GLB1	FAM192A	ARFGEF1
##	11	20	16	3
##	BCL2	CITED1	COMMD3	COMMD8
##	24	22	1	1
##	COMMD9	LYL1	SPI1	TNFSF11
##	1	22	22	24
##	TNIP3	TSC22D3	UNC5CL	ENSG00000212981
##	24	11	1	1

##	NOVA1	PCBP4	DPPA2	FAM153A
##	21	7	7	24
##	RORB	TRMT10A	TXNL4B	POP1
##	15	1	7	5
##	RPP14	ENSG00000206415	ENSG00000204596	KCNAB2
##	5	4	4	19
##	RET	WDFY3	AEBP1	ATOH1
##	10	13	11	8
##	BHLHA15	ELK3	GATA1	GATA2
##	13	22	22	22
##	ID1	MSC	PTF1A	RALGAPA1
##	22	6	9	15

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##	TCF21	TFPT	TWIST1	CAND2
##	7	16	22	8
##	TCEAL1	CDCP1	DENNND4A	KCNK3
##	13	11	14	6
##	KIF20B	LRFN1	OSBPL3	RIN1
##	22	24	2	14
##	RMDN3	SLC8A2	SLC8A3	SON
##	9	17	24	5
##	SRPK1	ENSG00000189229	CBWD7	SUV420H1
##	21	21	4	4
##	CCDC137	PVRL2	ZFPL1	ANKRD50
##	13	25	10	23
##	MTPAP	TPTEP1	ACTL7A	GNAL
##	1	22	8	21
##	FZD3	LAPTM4A	ZFPM1	LURAP1
##	8	5	22	7
##	MIDN	CTNNND2	DSCAML1	GRASP
##	19	22	16	14
##	PLK2	PLXNB3	BAI1	NRCAM
##	14	14	14	14
##	CADPS	SSX4	ANKRD13C	TRMT2A
##	11	4	11	2
##	DNAJC11	SAMM50	ATF5	CCDC136
##	4	4	22	7
##	CCDC141	CEP57L1	DPYSL3	GNPTAB
##	1	3	10	25
##	MPPED1	PPP4R1	STX18	ZNF365
##	2	23	13	7
##	FZD4	GPR125	TJAP1	BMP5
##	8	25	21	24
##	CHMP4B	KRTAP10-7	METTL6	NSRP1
##	19	24	20	10
##	RILPL1	TMX2	WDR81	ZCCHC6
##	21	10	22	14
##	ENSG00000206397	ENSG00000206486	NMRK2	MYL7
##	10	10	3	12
##	TNNT3	FLNC	TCAP	DLX5
##	4	7	9	22
##	KIF5C	NR4A1	PPFIA1	AGRN
##	16	22	4	7
##	DCBLD1	HLA-A	MFI2	SLC12A3
##	12	7	20	4

##	SRD5A1	ENSG00000206233	HSF2	PPP2R3A
##	19	7	4	14
##	BCKDHB	DCLRE1C	TRPC5	KCNK1
##	20	25	14	19
##	KCTD1	PPM1J	SALL1	SCNN1A
##	2	22	10	24
##	TFAP2C	ENSG00000205369	ABCC6	CALML5
##	22	16	24	22
##	CORO2B	DCT	FOCAD	FUCA1
##	2	7	8	24
##	LAP3	LRRN2	PRRG2	S100A13
##	6	7	3	13

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##	SEL1L3	SLC16A5	TAF15	TVP23BP2
##	24	23	21	10
##	WDTC1	ENSG00000206297	ACTR1A	CLVS1
##	10	7	7	19
##	FUNDC1	BBS4	DYNC1I2	SEC24D
##	14	19	24	24
##	MARCKSL1	PRSS12	SFT2D3	ZNF366
##	6	14	13	25
##	GPR143	HTR1A	NCOA4	NR2P1
##	19	8	22	22
##	RXRB	SLC39A9	ENSG00000206289	NUDT1
##	22	16	22	5
##	DERA	MTFR1	ZMIZ2	ENSG00000205168
##	14	15	3	16
##	ENSG00000205173	ENSG00000205175	ENSG00000205166	PRSS3
##	20	24	13	11
##	ZBED4	CARKD	TRIM71	CCDC47
##	2	12	24	24
##	COLGALT2	EFEMP2	LGALS9	SCRT1
##	3	7	14	7
##	SPPL2A	ENSG00000215672	ZBTB24	CREB3L3
##	15	4	17	22
##	CTNNAL1	HECW1	MAGEE1	7-Mar
##	9	24	1	24
##	PLEKH01	TBCB	TRAF5	TRIM22
##	24	22	24	7
##	CDKN2D	IFI27	RPRM	SERTAD1
##	12	22	10	22
##	CD320	TSPAN7	VPS54	MMS22L
##	14	20	14	3
##	MRPS7	CLIC6	SSTR5	XDH
##	13	14	23	4
##	GPAM	GPD2	NAT2	KCTD13
##	20	20	12	9
##	POLDIP3	KMT2C	CORO2A	AGBL3
##	2	22	22	3
##	KIAA1279	CALCR	RAMP1	RAMP2
##	9	14	14	24
##	ENSG00000213952	FOXL1	BTG3	PTRH1
##	20	11	15	13
##	CETN2	INHA	MGP	SOSTDC1
##	18	11	10	22
##	GDF7	GBP1	NOG	KPTN

##	22	19	22	3
##	ENSG00000215692	HOXA13	HOXC8	HOXD13
##	12	22	22	22
##	MGA	RAB30	STX7	NRBF2
##	22	4	13	22
##	TRIM35	EMILIN1	EID2	FOXH1
##	10	11	1	22
##	LITAF	NAGK	RANBP6	RNPC3
##	23	22	7	25
##	SKI	ZNF8	TTC25	FCN1
##	22	22	22	11

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##	FMOD	INHBA	INHBC	THBS4
##	11	11	11	11
##	VASN	ENSG00000143787	VPS39	DPP4
##	7	11	7	8
##	P2RY1	NTN1	GALNS	CCL22
##	21	8	4	3
##	CXCL10	CXCL11	FAP	KIAA1109
##	10	8	8	8
##	ADAM10	APH1B	EFNA2	CELSR1
##	22	22	4	22
##	LHX2	ADAM11	ARHGEF40	GAS6
##	22	16	4	10
##	ZP4	NCLN	ADAM2	CLGN
##	16	16	11	20
##	CD38	PTGFRN	MADCAM1	CD46
##	20	11	11	19
##	CD53	CHAD	FBLN1	ITGA1
##	11	23	11	11
##	ITGB1BP2	JAM2	MMP9	NCAM2
##	23	14	11	11
##	TGOLN2	TNC	VCAN	ENSG00000198802
##	5	11	11	10
##	ADAM23	LSAMP	OPCML	COA3
##	14	11	4	11
##	ENSG00000214234	ADAM29	ADAM33	BPIFA1
##	14	13	15	4
##	CDSN	IGLV1-40	LAT2	NOMO1
##	14	5	25	4
##	NPPA	PMEPA1	PPIC	RAI2
##	17	14	4	2
##	SPAG8	TNRC6B	VIP	ENSG00000206460
##	12	11	1	19
##	ADAM9	PCSK5	AUP1	AZGP1
##	11	9	11	20
##	EDIL3	DDHD1	SH3GLB2	MPPED2
##	2	20	7	11
##	ADAMTS4	MT2A	GPR50	ADAMTS5
##	11	19	18	11
##	TIMP3	ADAMTSL3	ADAMTSL4	DLK2
##	11	24	7	7
##	FHL3	CDC42EP1	KLF8	RFX6
##	7	7	12	7
##	STRIP1	LLGL1	PPP2R2B	PSMC2
##	11	11	11	17

##	ADAP2	ADAT3	ADCK1	GAPVD1
##	17	1	18	18
##	NQO2	RPS6KA2	TAOK3	AFF2
##	18	18	18	10
##	CCNI	CKS1BP6	DTX2	EYA1
##	20	18	23	22
##	LRRC15	OIP5	PKP3	RALGDS
##	2	1	23	14
##	RGL1	RHPN2	PDK3	RRAD
##	14	23	18	18

##	VKORC1	HEXIM2	SHANK1	PDE4C
##	11	7	14	21
##	PDE5A	PDE6A	PDE6B	PDE6C
##	21	21	21	21
##	PDE6H	PDE8B	GNGT2	CA8
##	21	21	14	8
##	ENSG00000215103	QDPR	RLF	ENSG00000197711
##	14	11	11	11
##	CD40	TRMT112	TK2	CCHCR1
##	24	21	21	20
##	UBE2W	ABHD16B	SAMD10	UBE2J1
##	1	1	3	5
##	ZNF512B	ADRA1D	AVPR1B	BDKRB1
##	22	23	14	1
##	CCKAR	CCKBR	CYSLTR1	CYSLTR2
##	14	14	3	4
##	GRM2	GRM3	GRM6	GRPR
##	14	14	14	14
##	HRH1	HTR2C	NTSR1	OXTR
##	1	14	7	14
##	PTAFR	PTGER1	PTGFR	TACR1
##	14	14	19	4
##	TACR3	DNAJC3	NQO1	RAD23A
##	9	1	1	1
##	ZNF322	CD1B	SLC11A2	ENSG00000214257
##	1	8	1	7
##	ADCYAP1	SHH	VIPR2	IL1R1
##	8	8	1	24
##	IL1R2	MINK1	SCT	GAS1
##	24	24	16	24
##	HHIP	ADIPOQ	ADIPOR1	CARD6
##	24	4	24	24
##	CENPC	BMP6	BMP8A	PYCARD
##	24	22	4	24
##	CARD8	NOD1	NRTN	SOX10
##	24	24	13	22
##	RAB3C	BCHE	DAG1	SCNN1B
##	14	21	11	14
##	TRIM7	ADM	EDN1	GPR182
##	16	20	4	24
##	RAMP3	CMA1	SLC31A2	IPCEF1
##	20	11	25	20
##	PCED1A	IKZF2	ADPGK	GDF9
##	18	12	4	4

##	FAM107B	ADPRHL2	C21orf33	ADRA1B
##	6	1	19	11
##	CCR1	OPRL1	SSTR2	CDC45
##	8	14	14	11
##	GABBR1	IGKV2-40	KCNMA1	SAG
##	11	11	11	14
##	TNS3	TTR	ENSG00000206466	C8B
##	11	11	11	11
##	C9	CKAP2	GTPBP3	PKHD1
##	11	11	11	11

##	PON1	C1QC	DNTT	GAST
##	20	11	11	20
##	MPO	PLG	ARSA	CD74
##	9	11	4	7
##	CST7	DCAF5	USP40	FKBP10
##	17	18	19	21
##	DERL1	FGG	HRG	KIAA0232
##	11	11	11	11
##	PCDH1	PF4V1	PLAT	ZNF292
##	11	11	11	11
##	ENSG00000205813	ENSG00000213044	KCND2	MYOZ3
##	11	11	9	7
##	SGCG	C3	COL13A1	COL6A1
##	11	11	11	11
##	CRB1	CRP	FSTL3	LTBP1
##	11	11	21	11
##	MATN2	MEP1A	REG3A	SCGB1A1
##	11	11	11	22
##	ENSG00000197621	GABRA1	GABRB2	JAKMIP1
##	11	3	3	11
##	GDF10	IGHA1	SERTAD3	TF
##	11	11	11	11
##	KCNMB1	MBL2	PRG2	BEND3
##	1	11	14	4
##	MCAT	CNTNAP2	CXCL9	IL27RA
##	4	14	4	24
##	IRF9	RNF31	UBE2F	AGA
##	24	10	2	11
##	KRT13	SACS	PPBP	ST3GAL3
##	11	11	11	20
##	ENSG00000206320	ENSG00000206253	ZNF446	CD163
##	20	20	7	14
##	KCNJ6	KCNJ9	SYNE2	RCVRN
##	14	14	19	14
##	KCNJ5	KLHL3	ENSG00000215782	ARAP1
##	13	14	8	10
##	ERAS	NOXA1	ADRBK2	ASNS
##	11	8	8	15
##	CCT4	SUMO1	C12orf4	AK1
##	17	4	19	5
##	ASAH1	MTMR3	ARF3	CBFA2T2
##	4	3	7	22
##	ECM1	EFCAB4B	GIGYF1	MEGF11
##	19	17	7	20
##	MEGF6	NELL1	NELL2	PLEKHA5

##	7	7	7	7
##	USP54	ZNF862	ZSWIM8	DPYSL4
##	20	7	7	10
##	SNX24	GBA2	SOBP	AFAP1
##	13	6	23	18
##	NUDT11	RAD51D	CD58	GCM1
##	6	22	11	22
##	AHSP	ZNF410	CREBZF	EGR2
##	11	3	9	10

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##	HCFC1R1	HOXB2	KCTD9	SAPCD2
##	6	5	24	10
##	KANSL2	BARHL1	CD1D	MTTP
##	8	25	7	1
##	SLC6A19	VIL1	ENSG00000112493	ENSG00000206235
##	19	10	7	7
##	ADCY10P1	ZRANB2	ENSG00000131003	LAMB1
##	19	21	25	11
##	RALGAPB	TACC3	TINAGL1	ENSG00000183760
##	8	14	22	25
##	ERAL1	STAC3	THAP1	C17orf70
##	21	24	7	12
##	FANCB	PTPN22	VIMP	IGF2R
##	12	10	7	24
##	LAMP1	F8	WISP2	SERPINI1
##	14	11	2	11
##	TFPI	NRG3	CFP	C3AR1
##	11	1	1	20
##	C5AR2	CR1	ENSG00000204364	AGAP1
##	11	11	20	22
##	AP3S2	CDK20	MPPE1	PLD3
##	8	3	22	22
##	SCARB2	AIP	BARX1	CARS2
##	5	22	19	19
##	COASY	COX7C	DPEP2	DRAM2
##	20	3	13	6
##	EMC8	KHK	MPND	MRPS33
##	7	20	14	15
##	PLBD2	RAB23	SLC7A5	SRFBP1
##	19	9	1	18
##	TMEM205	LARP4B	PROCA1	RBM4
##	24	22	14	5
##	ENSG00000197041	BBS5	BNIP1	CDK18
##	14	22	24	24
##	HECA	KCNRG	FBXL7	PRKG2
##	1	7	20	10
##	IRX6	TRAPP8	IHH	KRT78
##	22	12	22	11
##	PANK3	SUMF1	AZU1	AGAP2
##	22	7	12	12
##	INTS5	KLHDC10	SBK1	SLC52A3
##	14	18	15	20
##	AGBL2	EPS15L1	NPRL3	RNF216
##	3	19	20	3
##	AGFG2	TSPAN17	APOLD1	ATP13A2
##	4	17	20	20

##	NUDT5	NUDT8	GTDC1	C1orf111
##	20	20	18	16
##	C8orf48	CCDC11	CCDC112	FAM124B
##	17	7	3	7
##	TNNI1	TSPYL4	ZFC3H1	ZNF821
##	24	7	22	12
##	AGK	ZNF43	EPHB6	FAM86C1
##	20	10	22	1

##	GBP2	GBP7	HOXB6	HOXB9
##	4	4	7	7
##	TP53TG1	PIWIL4	AGO3	PIWIL3
##	21	8	6	3
##	AGO4	NR1D2	DGKA	PPAP2A
##	11	13	10	10
##	CHPT1	LIPG	PNPLA3	AGPS
##	10	10	20	20
##	HSD3B7	RDH11	EPHX2	IL33
##	20	20	20	14
##	NAT9	AGRP	GHRL	MC3R
##	4	5	11	5
##	GHRHR	MLNR	NPY	ASIP
##	5	4	5	5
##	PMCH	PMCHL1	PMCHL2	POMC
##	5	5	5	11
##	PPFIA4	PPFIA2	PPFIA3	AVP
##	4	4	4	14
##	AGTR2	ASTE1	DAPP1	FLYWCH1
##	11	16	19	10
##	NRG2	ODF2L	OVOL1	STYK1
##	8	6	10	10
##	TRIB3	DMGDH	TASP1	C9orf114
##	22	6	5	3
##	FGF22	FGF4	FGF9	UNC93A
##	10	10	10	14
##	ENSG00000214633	LOH12CR1	C1orf50	LRRK47
##	9	4	25	3
##	OSGEPL1	CYB5B	DNAJA4	FBXO15
##	8	13	20	24
##	FBXO32	FBXW4	URI1	POLR2B
##	17	9	21	21
##	TRMT11	PGR	ATP1A2	C1GALT1
##	1	22	9	4
##	MLC1	ASXL2	C11orf53	C9orf78
##	15	23	18	9
##	DCXR	DUPD1	EDARADD	FASTKD2
##	9	11	24	11
##	HEATR3	IER3IP1	IL17RB	IRAK3
##	4	20	3	19
##	IRF8	MALT1	MEDAG	OR10J1
##	5	20	14	8
##	SLIRP	TIFA	TIRAP	TLR3
##	20	20	9	3
##	TMED7	TMEM109	TRAFD1	ZNF675
##	24	13	9	12

##	TMCC2	USBPL9	C2orf69	INVS
##	24	1	22	14
##	MPZ	PLEKHJ1	TERF1	AHDC1
##	7	23	1	8
##	ACOT7	BEND2	CIC	FAM21C
##	7	24	11	19
##	FAM46B	FAT4	GCA	GPATCH8
##	7	7	7	2

##	HSFX2	IL34	KAT6A	KIAA1549L
##	20	18	20	13
##	KIAA2026	KLF11	KLHL12	MTERFD2
##	13	12	7	9
##	QRICH1	R3HDM2	SLC51A	STAC2
##	18	8	18	9
##	SUGP2	TMEM159	TTC19	UNK
##	6	2	12	1
##	VSTM2L	WNK2	ZC3H10	ZCCHC13
##	17	3	16	11
##	ZHX3	ZNF488	ZNF609	ZNF804A
##	8	21	5	8
##	ENSG00000212718	CDH3	ENSG00000206269	ENSG00000206378
##	13	24	19	19
##	TNFSF10	ENSG00000206171	NPTX1	NPTX2
##	24	10	1	1
##	SHKBP1	CA3	LMAN2	HBE1
##	11	7	2	11
##	PARP4	EFR3A	OSTC	AICDA
##	7	17	7	22
##	PDXDC2P	RNF219	SSR3	PMVK
##	20	7	9	7
##	GPR75-ASB3	C11orf1	ENSG00000182490	EMC2
##	1	11	22	20
##	HEATR6	POTEKP	GLRXP3	GSTA3
##	2	24	6	9
##	GSTA4	GSTA5	GSTM5	GSTT2B
##	9	9	9	9
##	MGST3	OCM	ENSG00000187919	AMOTL2
##	9	9	9	7
##	ATP6V0D2	ATP6V1C2	ATP6V1G3	ENSG00000171142
##	6	24	6	8
##	AIPL1	AJAP1	MAGEC1	COPS5
##	22	1	7	22
##	PRSS16	SPCS1	FANCC	AK2
##	22	22	1	6
##	PRKAG2	XPNPEP3	POLDIP2	COQ5
##	19	1	11	14
##	RPTOR	ENSG00000189285	NUDT2	IFT122
##	23	25	6	7
##	MND1	AK9	AKAP1	MAATS1
##	25	23	14	1
##	PRKAR1B	PTPN21	MYCBPAP	PTCHD2
##	14	21	4	20
##	ACCS	PPP1R9A	MLXIPL	AKAP10
##	7	5	6	23
##	AKAP13	BAK1	PRKCH	ENSG00000206218

##	14	24	6	22
##	BCL2A1	BCL2L10	GIMAP5	UBE3A
##	24	24	24	20
##	SLC26A10	SPRED2	NR1I2	NSD1
##	16	24	22	22
##	SLC16A2	NROB2	NR1H2	CLEC1B
##	22	22	22	9

##	SPERT	AKAP4	FSIP1	ENSG00000180922
##	15	10	3	24
##	AKAP5	GABRA2	GABRQ	GABRA3
##	25	3	3	3
##	GFRA4	PSPN	TNKS1BP1	AKAP6
##	10	25	8	23
##	AKAP7	AKIP1	DCHS1	YPEL2
##	14	3	23	19
##	AKNA	ZNF90	TRIM5	DNAL4
##	1	1	20	3
##	ZNF33B	AKR1D1	AKR1C4	AKR7A2
##	21	12	3	9
##	AKR7A3	AKR7L	DLC1	GAB2
##	22	5	24	10
##	MTCP1	PHLPP1	UXS1	YAP1
##	4	16	8	22
##	ZFP36L1	C10orf2	HOOK1	TRH
##	17	4	7	8
##	ENSG00000204775	ELAC2	CIZ1	SYNC
##	9	22	7	4
##	SYNM	BMF	APC2	ARHGEF39
##	25	24	8	24
##	CXXC4	FZD10	FZD2	FZD5
##	9	8	8	8
##	FZD6	FZD7	FZD8	FZD9
##	8	8	8	8
##	NKD2	PCBD1	PHF1	AZIN1
##	7	7	7	1
##	CD52	DUS4L	NAMPT	RMI1
##	3	8	10	25
##	FOXG1	MAPK4	ZFPM2	CNGA1
##	22	10	22	11
##	BLVRA	CXorf27	FICD	PRPF40B
##	3	14	20	22
##	ENSG00000170276	EDNRB	NOSTRIN	ARHGEF10L
##	17	14	1	6
##	AMELX	CASC5	CCDC181	CSRNP2
##	16	22	4	20
##	GOLGA8F	GOLGA8G	KIF18A	MYO16
##	8	11	14	3
##	PHACTR1	PPP1R10	PPP1R15A	PPP1R15B
##	11	4	1	22
##	PPP1R2	PPP1R37	PPP1R8	TPRN
##	19	7	4	20
##	TUSC3	ZFYVE16	ENSG00000126258	ENSG00000206489
##	18	19	10	4
##	MAST3	CBFB	EHD2	BCAR1
##	13	22	22	23

##	C1orf106	SAMD4A	LTK	RABEP1
##	23	23	10	13
##	KBTBD7	SPDL1	PDZK1IP1	PHF10
##	8	22	8	4
##	ENSG00000131113	UROS	NAE1	MUT
##	15	16	8	15

##	CD6	CYTH3	ALDH16A1	ALDH1A2
##	11	24	11	12
##	BCMO1	FAM178B	GPR108	MGAT4B
##	4	5	7	4
##	MUTYH	MT-ND1	NDUFA6	NDUFB6
##	11	9	9	9
##	NDUFS5	PER1	SPG20	NCAPG2
##	9	19	21	9
##	NCAPH2	BTBD1	TRIM6	BPY2
##	11	4	12	15
##	BPY2C	PHF17	EHD3	CCNB1IP1
##	14	9	7	20
##	CYP2D6	HIBADH	MIB1	MID1
##	20	20	20	20
##	UPB1	MID2	SCCPDH	DPYS
##	20	7	20	16
##	ALDH3B1	MAOB	DENND6B	NNMT
##	20	20	1	20
##	LCN1	PGAP1	PIGF	ALG13
##	11	13	13	7
##	GRIP2	ERC2	PRLHR	HBS1L
##	14	4	14	5
##	USB1	TOP3B	IGF2	MAB21L1
##	12	7	11	22
##	MMAB	TBX2	UNC119B	EBF3
##	18	22	4	22
##	RXFP2	ACAP2	DUSP19	ARHGAP4
##	11	11	20	10
##	PYY	IAPP	LRMP	COP8S
##	3	18	17	16
##	SRI	ZNF148	ALKBH7	ALMS1
##	19	10	24	20
##	XAGE1A	ALOX5	ALOX5AP	CYP4F3
##	15	6	2	20
##	HSPB9	C11orf30	SLC25A19	LM03
##	22	24	7	7
##	RALYL	RBM41	IMPA1	IMPA2
##	7	7	12	12
##	LENG1	ELMOD2	WDR47	ENSG00000215718
##	11	19	7	2
##	ALS2CR11	C10orf82	MEF2B	ZNF414
##	7	18	24	14
##	ALS2CR12	SULT2B1	ALX4	LEF1
##	21	23	22	22
##	CDX1	HOXC4	MEOX1	OLIG2
##	9	11	17	22
##	NXF5	SIRT4	AMBp	CD79A
##	24	9	11	10
##	CD79B	TOP	CD79B	CD79B

	CD79B	JGJ	CUL5A3	IMEM179B
##	10	5	13	24
##	JPH3	AMER2	HERC2	AMOT
##	20	1	22	14
##	TIMM21	CDC26	KCTD5	WDFY2
##	15	14	7	23

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	ASCC1	C10orf54	C10orf62	CCER1
##	20	22	7	7
##	DHRS1	FABP3	HEY2	IP6K2
##	19	8	22	16
##	KIAA1683	NEU4	RASD1	HERC1
##	14	7	23	22
##	MCTP1	CHRNBT4	KLK1	LEKR1
##	18	13	22	9
##	SERPINI2	FBX043	ANGEL1	ANO1
##	7	9	6	17
##	ANGPT1	ANGPT2	ANGPT4	ANGPTL1
##	20	12	8	22
##	NR2F6	ANGPTL3	CNTN2	CNTN6
##	22	11	14	14
##	ANKFN1	ANKLE2	CHD6	NIT1
##	5	22	9	3
##	RHOT2	ANKRA2	ANKRD11	MTMR10
##	8	4	24	16
##	ANKRD13B	ANKRD13D	ANKRD17	SPARC
##	12	15	16	11
##	ARID3C	C5orf22	DUSP21	FOXD4L2
##	9	4	19	10
##	FOXD4L4	FOXD4L5	FOXD4L6	FRMPD4
##	13	6	4	6
##	OXSR1	SEC61B	SRD5A3	CTSK
##	12	18	4	11
##	SGTB	TMEM194A	YEATS2	ANKRD2
##	20	9	9	22
##	ANKRD24	CRADD	DDIT4	ETHE1
##	7	24	4	8
##	GPRASP2	KLK10	TSPAN6	ENSG00000214955
##	4	3	4	4
##	ANKRD27	MRPL9	TMC01	ENSG00000206488
##	22	1	24	19
##	ENSG00000206405	ANKRD39	ANKRD54	ANKRD6
##	12	4	15	16
##	ENSG00000206421	FAM49A	VNN2	ANKS3
##	24	20	10	1
##	BRE	CENPB	DZANK1	EGFL7
##	10	7	5	3
##	NSMF	PDZD4	RAB11FIP4	RINT1
##	17	1	22	10
##	TENC1	TSPYL2	TXND11	ZNRF3
##	11	7	6	23
##	ZFAND1	ANO10	CLN3	CPA1
##	13	15	20	6
##	CHMP5	LDB2	SIGMAR1	AN08
##	6	22	13	24
##	ANP32B	ANP32E	PCSK9	ANPEP

##	1	25	9	9
##	ANTXR2	ANXA11	ANXA13	BCL2L13
##	19	24	8	20
##	DNAH7	IRGQ	PLA2G4C	CALB1
##	5	20	9	17

##	UQCR11	UQCRH	UQCRQ	ANXA4
##	5	5	5	1
##	MATN1	RILP	IFNA1	ANXA9
##	11	16	10	7
##	DBH	PNMT	TPH2	AP1AR
##	20	24	23	24
##	DNER	ELAVL2	M6PR	NECAP1
##	2	4	16	12
##	SYNRG	BST1	FLCN	REN
##	24	20	4	3
##	AP1G2	HUNK	AP3M1	MGAT2
##	8	5	8	4
##	AP1M2	PVR	AP1S1	ARMC6
##	1	1	1	9
##	ATF7IP2	CACNB3	SYT3	WNK1
##	22	14	14	14
##	CLIC2	AP4B1	AP4S1	ZBTB7B
##	13	10	1	17
##	PHRF1	ZNF496	CD244	CCDC92
##	22	23	11	11
##	FAM65B	SIPA1L2	SUN3	NLRP3
##	13	17	14	14
##	NLRP4	ENSG00000081770	CMTM4	SSNA1
##	14	9	8	11
##	NDUFA12	CNTNAP4	HIF3A	ENSG00000171282
##	14	14	18	9
##	PDZD2	SDCBP2	DLL4	KCNIP3
##	14	24	22	22
##	HN1	RP1	FOXP1	LY6H
##	24	5	8	6
##	SNX22	TNFAIP8L1	ZBTB48	ENSG00000118976
##	11	24	8	8
##	DSG2	TMEM245	SOX17	MAPRE3
##	23	20	1	13
##	SPATC1	ENSG00000215476	MMP11	MMP8
##	18	25	11	11
##	APCS	FCGR2B	FCGR3A	FCGR3B
##	11	18	10	11
##	TG	LY6E	ASGR1	CCNO
##	1	19	4	1
##	MBD4	SMUG1	ENSG00000184701	ENSG00000215304
##	11	7	16	1
##	F2RL1	INPP1	VRK1	APH1A
##	11	13	25	22
##	HSD17B14	MAP6	APITD1	GHSR
##	7	10	9	7
##	MRGPRX2	SSTR3	SSTR4	SST
##	11	17	11	23
##	APMAP	CRAMP1L	ST6GAL1	ASIC4
##	3	23	10	20

##	APOBEC2	BNIP3	TRA2A	DUSP11
##	22	24	21	1
##	SNRNP25	APOBEC3B	RELN	KAL1
##	21	20	1	11

##	LAMA3	TXNRD2	APOM	ENSG00000206409
##	11	7	13	23
##	ENSG00000206304	APOOL	BRI3	IL37
##	25	8	5	22
##	ST6GALNAC2	APPBP2	C10orf137	C6orf106
##	4	7	7	16
##	KIF6	MFSD3	MLLT3	MUL1
##	16	7	4	24
##	NFYA	ODF3	PI4KAP2	SH3BP5L
##	22	23	4	14
##	SLC22A6	WDR24	WNT5B	ZCCHC12
##	9	17	8	11
##	ZNF800	ZNF142	ZNF91	INTS1
##	7	11	9	10
##	FAM124A	CAPN15	ZFYVE19	CER1
##	20	22	4	8
##	PORCN	SFRP2	SFRP5	WIF1
##	8	8	8	8
##	APPL2	RAB22A	C1orf109	SLC35B2
##	24	19	1	8
##	APTX	CALCOCO1	CEP350	CNTROB
##	7	7	22	1
##	CRYBA2	AQP5	TRPS1	GLS
##	9	17	20	6
##	HPGD	MRPS10	PDXDC1	SAMHD1
##	6	2	22	20
##	SMAP1	TFB2M	TMEM11	XPO4
##	13	19	20	9
##	AREGB	WT1	CXCL1	CXCL5
##	7	22	23	8
##	CXCL6	MMP10	MMP26	RECK
##	3	11	11	1
##	ENSG00000167807	ARRDC2	C9orf85	HAACL1
##	22	6	16	9
##	OVCH1	TBX1	CENPH	SLC7A10
##	21	12	5	14
##	TRIM31	PPAPDC1B	ARFRP1	DAD1
##	4	13	13	13
##	FDFT1	NANP	DOPEY2	MEPCE
##	13	12	13	22
##	SOX1	ZDHHC9	VPS26A	ARHGAP1
##	14	25	1	22
##	BNIPL	H3F3B	MUS81	LRP2BP
##	24	25	25	14
##	KDM5D	PHF8	SMARCC2	TMC04
##	25	25	25	25
##	ENSG00000100118	EME1	TDP1	CPSF6
##	25	13	25	21
##	FUBP1	HSD3B1	HSD3B2	RAVER1
##	21	12	20	15
##	DNM1L	DNMC	DNMV1	DNM1L

	RPMT	RPTG	RPRI	SNAT
##	21	22	22	2
##	ARHGAP10	MYBPC1	NUDT12	CERS5
##	18	20	20	1

##	IER3	HNF4A	B9D1	DNAJC12
##	21	22	19	21
##	DENND1A	F2RL3	TRIM8	FABP6
##	19	14	19	17
##	MMP1	S1PR3	ARHGEF5	ARHGEF9
##	11	14	8	22
##	GPHN	GLRB	C12orf65 ENSG00000141325	
##	4	9	21	25
##	ARID3A	ARID3B	ARID4A	NDNL2
##	5	2	22	4
##	NPDC1	PKIB	SP2	TEAD3
##	7	22	14	23
##	ARID5A	EML4	SLC1A6	UBE2L2
##	7	7	16	3
##	ARL14EP	ARL2	ARL2BP	ARL3
##	14	14	4	4
##	RP2	UBR1	ARL4A	SP100
##	23	4	20	22
##	ZWINT	ARL5B	ARL5B-AS1	C9orf64
##	22	25	4	8
##	TCTE1	ARL6	ARL6IP4	ARL6IP6
##	13	7	19	1
##	ARL6IP1	C1orf168	SLC25A24	C10orf35
##	7	4	4	16
##	MS4A10	ARMC10	KBTBD3	MRPS25
##	15	1	1	1
##	UFC1 ENSG00000211618		ARMC7	CDPF1
##	16	11	23	15
##	DAZAP1	DHX30	EXOC3L1	RAPGEF6
##	21	4	24	21
##	UBAP2L	CD22	DOK3	LILRB4
##	21	10	5	17
##	CUEDC2	NSMCE1	POLM	TRADD
##	22	25	5	24
##	ARMC4	EFCAB1	SPRR2B	ARNTL2
##	7	18	4	22
##	RNF19A ENSG00000214699		RCOR1	CRIP2
##	20	20	2	24
##	PDLIM5	RND2	IFIT3	MTA3
##	24	8	22	1
##	RING1	TCEB3C	ARPP21	ARR3
##	22	24	12	1
##	OPN1MW	OPN1MW2	RCOR2	RNASE6
##	1	25	22	10
##	GRK1	WNT7B	ARRDC1	GAL3ST1
##	14	8	1	4
##	GAL3ST2	NEU2	NEU3 ENSG00000184494	
##	4	4	4	4
##	ARSB	HSD17B3	ARSD	GALC
##	4	4	4	4
##	HSD17B1	HSD17B2 ENSG00000112474		CERK

##	4	4	4	4
##	TMEM259	ARSF	ASA2H	TCP10
##	4	12	12	14

##	ASB1	ASB12	ASB13	ASB9
##	7	24	8	7
##	ASB2	ASB6	ASB7	ASB8
##	24	21	16	1
##	ENSG00000214320	ASCL4	REXO1	ASGR2
##	3	22	22	9
##	ASIC2	STOML1	EXOC6B	ASMTL
##	14	14	13	13
##	GOLGA6L3	ENSG00000186322	ENSG00000156363	CCNE1
##	4	10	10	22
##	CCT5	NDUFS2	PMM2	SLC25A13
##	17	17	6	17
##	MRT04	BCKDK	C11orf65	CENPV
##	15	4	13	4
##	NR3C1	RREB1	SENP1	SENP6
##	22	4	4	5
##	ZNF174	ZNF462	ZNF687	ZNF768
##	4	4	4	4
##	ASPM	SCUBE1	SLMAP	ASUN
##	14	25	20	24
##	ATAD5	ATAT1	DBP	HLF
##	8	13	22	22
##	TEF	SIX4	MAFB	TRIM69
##	22	19	22	16
##	ATF3	CCDC17	ENSG00000206314	ATF6
##	22	7	12	22
##	FKBP15	ENSG00000168468	MIF4GD	BARX2
##	22	22	7	22
##	ATG10	CLASP2	DBF4B	FAM76B
##	20	14	7	7
##	LINGO1	THAP10	ENSG00000180576	ERCC6L
##	7	10	7	4
##	CARD10	ATG4A	MAP1LC3A	ENSG00000185957
##	14	12	15	6
##	TTC5	GABRG3	ATG4D	CLPP
##	1	3	3	10
##	FEM1B	CARF	CDKN2AIP	ZNF227
##	1	13	6	12
##	CHAC1	KIAA0319	LRRC3B	LYPLAL1
##	5	7	16	23
##	RBMS1	EHF	NLRC3	ATL2
##	24	7	24	20
##	RDM1	ATMIN	ZNF652	ENSG00000206207
##	1	20	23	11
##	ENSG00000206280	GORAB	MGEA5	KLF2
##	15	20	23	15
##	ATXN7L1	PTH	ATOH8	NPY1R
##	8	4	10	14
##	RAB7L1	BTD	PRM1	NRM
##	14	22	21	24
##	ATP1A4	ATP1B1	SLC15A1	MALL
##	10	1	6	10

##	ATP1B2	ATP1B3	SLN	HCN4
##	24	20	13	1

##	NAGLU	RAB17	RAB33A	RAB4B
##	10	8	14	14
##	MTMR4	ATP2B4	ATP4A	CCDC102A
##	1	14	5	19
##	DMBX1	MAP3K15	PIGZ	CYP7A1
##	9	19	18	20
##	SELRC1	CTAG1A	CTAG1B	ECHDC2
##	8	7	23	21
##	MRPL19	ATP5SL	ATP6AP1	CYP11B1
##	9	22	10	20
##	CYP11B2	ENSG00000168482	ATP6V1B1	DNAJC28
##	3	20	5	4
##	DRC1	RCN3	ATP6V1G2	ATP7A
##	8	7	1	10
##	ATOX1	ATP7B	GLRX	NFIC
##	10	13	25	4
##	ATP8A1	CWH43	SMARCAD1	TRAPPGB
##	13	13	25	13
##	MINA	ATPAF1	ATPIF1	FAM134A
##	14	11	21	4
##	ATRAID	ATRIP	IFT20	FOXP3
##	22	8	7	3
##	MTUS2	ATRX	ZZEF1	TBX4
##	16	22	13	10
##	TRIM33	ENSG00000206357	RENBP	FAIM2
##	16	21	20	22
##	PPARGC1B	GLRA2	IQCQ	DCAF8
##	22	4	14	21
##	PARP11	RHCG	AIF1	ENSG00000206319
##	11	13	22	11
##	ENSG00000206428	ATXN7L2	MTERFD1	TMEM67
##	22	20	3	18
##	LALBA	MST1	MST1L	ADARB1
##	20	11	11	12
##	DSN1	NOVA2	SPC24	SPC25
##	22	5	22	22
##	AURKC	AVIL	AVL9	LRP5
##	13	8	8	8
##	DKK1	MESDC2	DKK2	DKK4
##	8	15	12	8
##	WNT1	ASH1L	SOX13	ZNF107
##	8	22	10	19
##	AXL	IFNGR1	B2M	CD1A
##	10	10	7	7
##	CD1E	HFE	HLA-H	LILRB1
##	14	7	7	7
##	TAP2	ENSG00000206299	ENSG00000206413	ENSG00000206450
##	7	7	7	7
##	ENSG00000206505	ENSG00000206443	SCARF1	SLC6A4
##	7	7	22	14
##	CD1C	CD8B	OR10C1	PPIAP30
##	12	7	1	7
##	ENSG00000174715	ENSG00000206296	ENSG00000206409	ENSG00000206461

```
## ENSG00000206366      EMID1        LUM        CTSH
##      14            16            2          24
##      TFR2          PDDC1        PPIAP29    EPB42
##      21            22            16          3
##      ACAP1          SUN1          KIR3DL1    KLRD1
##      13            22            2          7
##      LILRB2         MAGEA1      ENSG00000215758 ENSG00000213016
##      7              7            20          23
##      KIR2DL4       ENSG00000215764     B3GAT1    B3GALT6
##      7              7            3          16
##      CSGALNACT1    CSGALNACT2    EXT1L2     B3GAT3
##      16            16            16          16
##      CHSY3          EXT1         B3GAT2    B3GNT1
##      16            16            16          6
##      GALM           GCKR          LCT         DEF8
##      11            18            4          24
##      B3GNT4         ZFAND3      B3GNTL1    B4GALNT1
##      22            16            9          3
##      GALNT16        GALNT18      GALNT3    GALNT7
##      4              4            4          4
##      GMDS           B4GALT2     B4GALT6    GALNTL5
##      4              4            4          4
##      GCNT1          ST3GAL2     UGGT2     ZC3H18
##      6              20           4          1
##      B4GALT7        XYLT1       B9D2      BAALC
##      19            13            5          15
##      BAAT           SLC7A11     BAG1      GSKIP
##      5              5            1          12
##      HBEGF          BCL2L14     BIK       SERPINB8
##      11            1             24          11
##      TACR2          TP53AIP1    VRK2      SUPV3L1
##      24            24           7          9
##      MMP7           HGFAC       POU3F3    PPP1R1A
##      11            11           11          10
##      GPR135         ROR1        ROR2      UNC5A
##      4              7            22          16
##      PSTPIP2        THAP2       FM01      VCPIP1
##      18            18           13          22
##      BAHD1          ENSG00000186852 CCDC116    CLDN2
##      7              7            7          7
##      COL8A1          FAM27E4    OTX1      SMCP
##      7              7            7          7
##      ZNF638          MAGED4      MAGED4B    YTHDF2
##      7              16           2          12
##      BAIAP3          BAMBI       BANK1     BANP
##      22            3             15          5
##      BAP1           BRCC3       CCDC113    KATNBL1
##      3              22           4          4
##      NKIRAS2         TPM4        ORAI1     BASP1
##      2              12           10          19
##      AIF1L          MYL6B       TICAM1    BATF
##      2              14           22          22
##      BBOX1          LSM14B     BBS2      BBS9
```

##	BCAM	BCAN	TNR	BCAP29
##	11	11	11	19
##	CSPG4	EFS	TNS1	GRIPI
##	14	3	3	7
##	SH2D5	SH3BGRL3	HAUS2	CAPN2
##	8	19	1	11
##	ZUFSP	ZIC2	BCAS1	COLQ
##	9	10	9	8
##	ENSG00000122339	MCCC2	CAB39L	ZNF20
##	10	4	5	4
##	ZNF79	BCL10	C9orf89	CARD14
##	12	24	8	2
##	CARD9	KRT33B	TNFRSF10A	DEFB4B
##	24	11	24	9
##	LY96	TNFRSF21	BCL11A	PTCH2
##	1	18	22	22
##	SFRP1	SFRP4	BCL11B	BNC1
##	8	8	22	24
##	DUSP22	EEF2K	GRIPA1	BEST1
##	9	18	21	17
##	SGCB	SGCE	SGCZ	TAC4
##	11	11	11	6
##	BCL2L12	LYZL1	LYZL2	BCL6B
##	18	4	1	6
##	BCL7A	IDE	PRRX2	BCL9
##	1	25	25	10
##	PYGO2	BCL9L	PCGF3	SMS
##	3	14	9	8
##	ENSG00000167744	CCK	MCOLN1	BET1
##	20	14	7	13
##	SEC22A	COG2	COG5	COG7
##	13	13	13	13
##	BUD13	SNAP23	CNNM2	TRAPP2L
##	21	13	13	25
##	WDR91	BFSP1	BFSP2	BHLHA9
##	24	7	16	25
##	BHLHE40	BICD1	DDX4	TNFSF14
##	4	7	22	24
##	ENSG00000206283	ENSG00000204474	BIRC5	USF2
##	25	16	24	22
##	PTP4A2	SERPINB3	SERPINB4	BLCAP
##	12	2	11	16
##	EFHD2	TINAG	CD72	BLOC1S3
##	22	10	10	7
##	BLOC1S6	HMG20B	LSG1	SKA1
##	7	22	8	19
##	MRPL52	UBE2S	SKA2	EBAG9
##	19	12	18	24
##	VOPP1	UGT2B10	BLVRB	NBR1
##	4	3	3	10
##	BLZF1	BMI1	CBX7	E2F6
##	12	22	22	22
##	IMMT	KMT2A	GPC5	CHCHD6
##	4	22	8	4

##	ECSIT	HJURP	KIF22	MTX2
##	14	20	22	4
##	NIPSNAP3A	STMN4	ENSG00000206318	OXT
##	20	4	12	9
##	RNASEK-C17orf49	SENP3	GRHL1	TWSG1
##	22	22	22	14
##	BMP15	EXD2	BMP3	BMP8B
##	6	6	11	22
##	BMPER	NRP2	BOLA1	BOLA2B
##	22	10	14	12
##	BOLL	DAZ2	DAZ4	DZIP1
##	7	7	7	7
##	BORA	BPIFB3	CHST11	SLX1B
##	3	23	10	5
##	SULT1A1	SULT1A2	BPY2B	DTX1
##	13	1	20	22
##	DTX3	HPCAL4	DHTKD1	DSC1
##	14	3	13	24
##	DSC2	DSC3	DSG3	CNKSR1
##	5	9	25	4
##	RIT1	LRP4	NPY2R	TEAD4
##	22	23	14	22
##	STAP2	BABAM1	BRD1	STAR
##	14	14	24	16
##	FAM129B	KDM3B	KLF10	ENSG00000162606
##	18	2	20	17
##	HEXDC	FDXR	SOX2	BRI3BP
##	22	7	22	1
##	BRPF1	BRS3	GRP	NMB
##	25	1	1	4
##	NMBR	BRWD3	BSCL2	ENSG00000181368
##	1	10	8	10
##	BSDC1	BSG	PPIL2	SLC16A3
##	11	11	2	5
##	NT5C	NT5C1A	NT5C3A	NT5E
##	20	20	20	20
##	FKBP1B	HOMER1	BST2	CLEC4C
##	23	14	11	10
##	FCER1A	BTLA	BTN1A1	CCDC28A
##	17	18	23	19
##	CWF19L1	GNAO1	CAPSL	LCA5L
##	21	14	25	6
##	RABGGTA	RSRC2	FFAR2	HRH4
##	1	1	11	14
##	PTPRU	SCN8A	USP39	PPIL1
##	14	8	21	2
##	RBPJL	UPF2	LIMD1	HAL
##	9	13	10	20
##	BZRAP1	TSP0	BZW1	BZW2
##	2	11	13	3
##	CD2	KIF14	SUCO	ENSG00000167524
##	3	8	7	5
##	SPRYD7	C10orf68	C11orf31	C11orf48
##	12	12	21	17

##	C11orf68	C12orf23	KCND3	SPOCK3
##	21	25	4	18
##	FAM91A1	C6orf62	C14orf119	C14orf80
##	22	6	5	12
##	C15orf41	C16orf45	C16orf52	CRIPIT
##	17	12	21	14
##	CTSF	RPP25L	C16orf70	BCAS3
##	12	3	18	18
##	MAMLD1	C16orf74	C17orf59	C18orf25
##	11	12	6	9
##	C18orf56	C19orf40	FUT1	ST6GALNAC3
##	8	7	20	10
##	ST6GALNAC6	RHBDL3	C1orf27	C1orf35
##	12	5	24	8
##	ZCCHC17	NKAP	C1QB	C1R
##	7	22	11	11
##	PTX3	C1S	MMP12	SPOCK1
##	11	11	11	11
##	TIMP4	JMJD4	DNAJC30	DNTTIP1
##	13	23	3	21
##	C1QTNF1	C2	C5	FCN2
##	4	11	11	9
##	C20orf195	KCTD17	OBFC1	SDSL
##	9	7	7	8
##	C20orf27	C21orf91	C22orf23	EVI5L
##	11	7	23	23
##	CCDC149	MORN4	C2CD2L	C2orf44
##	19	11	17	17
##	CFHR3	CFI	CPN1	IGHV4-39
##	20	11	7	11
##	VSIG4	CPN2	C4BPB	C4orf27
##	1	8	11	16
##	C8A	C6	C6orf165	C6orf203
##	11	11	25	10
##	C6orf25	CUBN	GDPD2	RILPL2
##	2	11	7	25
##	C7orf26	C7orf43	TMEM50A	C8orf33
##	13	15	19	4
##	C9orf117	C9orf16	KRT20	PRC1
##	16	3	7	7
##	LRRC45	C9orf163	LRRK1	C9orf24
##	3	17	10	3
##	C9orf9	CA1	CA10	CA6
##	20	19	3	10
##	CA9	CABP2	CABP4	CACFD1
##	4	12	3	5
##	KCNJ15	CACNA1G	CACNA2D1	POLK
##	7	14	18	1
##	CACTIN	CXorf56	LST1	SLC9B2
##	21	21	23	13
##	TARBP2	ENSG00000206433	DNAJC13	MSANTD1
##	22	18	9	1
##	ARMC8	DDX41	FGD2	NKTR
##	25	6	20	21

##	NRDE2	RBM25	SFSWAP	TRA2B
##	3	9	23	21
##	ENSG00000168593	ENSG00000215726	IFT52	LGALS1
##	21	25	15	19
##	CYP24A1	FAXC	METTL4	PRSS3P4
##	13	13	15	5
##	STARD7	TRAF4	ANKLE1	G2E3
##	14	22	6	16
##	COQ3	COL11A2	TRIM38	HORMAD1
##	13	1	9	10
##	TOMM7	TRPV6	CALCB	ROPN1B
##	23	14	9	10
##	ENSG0000083622	UCN	FOXE1	IGKV3D-20
##	16	19	10	4
##	ENSG00000211610	ENSG00000211629	ENSG00000211607	CLEC3B
##	11	23	11	19
##	TNFAIP6	TSHB	CALU	SLC9A3R2
##	11	3	12	1
##	TMEM43	HSPA2	PODXL	PTH1R
##	1	1	25	14
##	WWTR1	ZIC1	ZIC3	CAMKV
##	21	19	21	20
##	CENPT	DCAF10	TAX1BP3	CAMP
##	14	17	14	11
##	FPR2	CAMSAP1	CAMSAP3	CAMTA1
##	11	22	9	11
##	ENSG00000173636	DEFA5	SERPINB13	SPINK5
##	11	21	11	5
##	TST	CA4	CAPG	CAPN1
##	20	3	9	24
##	CTSC	FHL2	SH3BGR	SLIT3
##	24	24	18	7
##	UFSP2	FHL5	IGFBP5	RALBP1
##	8	22	11	24
##	CAPN10	CAPN11	CTNNBL1	RNF157
##	18	22	7	18
##	TUB	ZDHHC1	CWC15	UAP1
##	8	22	8	17
##	LAMTOR4	FM05	GAS2	CAPN3
##	22	4	24	3
##	FKRP	PPM1L	CAPN5	CAPN7
##	12	23	10	4
##	CAPZA3	CARD16	CARNS1	IL1F10
##	10	16	15	19
##	IL1RN	GOLGA7	CIDEB	IL18
##	24	22	18	24
##	CASP8AP2	CASQ2	TRDN	ASPH
##	24	18	4	1
##	HRC	TLR10	CD151	ERBB2IP
##	24	9	11	22
##	ITGAE	VCAM1	LARGE	GATA3
##	11	11	11	22
##	CBFA2T3	ENSG00000215751	CISH	CBWD3
##	22	1	10	13

##	TTC39A	CBX1	ZNF268	CBX6
##	13	22	14	1
##	CBY1	RBM26	GIGYF2	CHIC2
##	24	25	21	7
##	GLIS2	KIAA0907	CCDC158	CCDC104
##	3	4	12	21
##	CCDC107	CCDC109B	CCDC130	CCDC134
##	23	12	7	23
##	CCDC14	CCDC159	CCDC19	NDC1
##	7	12	7	19
##	CCDC24	CCDC41	CCDC64	CCDC67
##	5	9	15	11
##	CCDC80	PLEKHF1	ZNF217	CCDC91
##	4	4	2	20
##	TESC	CCDC93	ENPEP	CCL1
##	22	8	18	9
##	CCL17	CCL13	CCL15-CCL14	CCL24
##	5	8	13	23
##	CCL26	CCL16	CCL19	CCR7
##	25	8	8	3
##	ENSG00000187186	CCL2	CCL7	CCL20
##	8	8	8	14
##	CCL23	CCL27	DARC	CCL4L2
##	8	8	8	8
##	CCM2	SOX18	VGLL2	CCRN4L
##	5	23	15	23
##	MRPL50	CCNDBP1	ZNF334	HOXA5
##	25	24	7	22
##	UFL1	ZER1	HOXB3	MIEN1
##	9	22	22	3
##	TMED6	DDR GK1	FAM219A	CDKN1B
##	22	12	22	22
##	SUMO4	SKP2	CLK3	HELZ
##	4	22	4	4
##	NUFIP2	ENSG00000205570	ENSG00000205575	CCNF
##	4	4	4	23
##	CCNG1	POC1B	ESR1	IMMP2L
##	22	4	22	4
##	ENSG00000206225	AAMP	FRMD5	ENSG00000215629
##	7	22	4	8
##	CCR4	CXCL12	CCR6	DEFB103B
##	4	11	20	17
##	DEFB4A	CCR9	CCSER1	CCSER2
##	13	11	3	12
##	GBE1	OSBP L5	THEG	USP47
##	25	13	7	20
##	PIK3C3	HELB	RPA4	TIPIN
##	10	10	23	19
##	TREX1	TMEM256	CD101	CD164
##	20	8	11	1
##	HLA-DQA1	ENSG00000206240	MYCL	CD200
##	23	7	11	21
##	CD200R1	HCRT R2	CD209	FABP7
##	20	23	9	11

##	SCRN3	B4GALT5	CD27	CD33
##	7	13	20	18
##	PODXL2	MTMR1	SBF1	CD3D
##	19	20	21	10
##	CD3G	CD4	ANKUB1	ATP10A
##	10	19	19	6
##	HLA-DQB1	HLA-DRB1	HLA-DRB5	4-Mar
##	3	7	12	14
##	PIP	SPG21	TSSK2	ENSG00000168384
##	3	7	19	11
##	ENSG00000204276	ENSG00000206291	ENSG00000206236	ENSG00000204244
##	8	7	20	23
##	ENSG00000168399	ENSG00000168383	ENSG00000206258	ENSG00000196610
##	6	18	7	19
##	ENSG00000196101	HCRT	HLA-DMA	TRAV8-4
##	23	9	7	7
##	ENSG00000206293	ENSG00000206229	ENSG00000206308	ENSG00000211762
##	7	7	7	7
##	CD7	VPREB1	ENSG00000205631	CUTC
##	21	14	19	7
##	MTMR9	ZNF263	TSKS	ICOSLG
##	7	7	22	23
##	KATNA1	SLC30A7	GSTZ1	CD5L
##	4	24	9	12
##	SECTM1	CD70	CD80	CD84
##	25	9	10	12
##	CD86	CD99	ARL11	FAM69A
##	10	3	7	12
##	GLYCTK	PLAC8	SEMA4G	SIGLEC5
##	9	12	8	11
##	STAMBPL1	TLDC1	ENSG00000111980	ENSG00000206395
##	19	2	10	14
##	CRB3	PARD6A	KRT81	MORC4
##	8	14	7	13
##	TFPI2	THAP5	THSD7A	TSKU
##	11	22	9	9
##	USP25	ZMYM5	SEMA6D	CDC42EP3
##	19	22	21	14
##	CDC42EP5	CDC42SE2	PSKH1	SEC16B
##	10	10	9	11
##	CDH13	CDH15	CDH7	CDH9
##	13	14	4	14
##	CDH6	CDH18	CDH16	CDH17
##	9	8	7	22
##	CDH19	CDH23	CDH5	CTNNNA1
##	9	3	24	1
##	P2RX4	P2RX6	FAM84B	TRIM29
##	23	14	1	1
##	VEZT	LLGL2	CDH8	CDHR2
##	3	14	18	1
##	SLC17A1	CDIP1	UNC5B	NFRKB
##	14	4	9	3
##	CDK10	CDK15	CDK2AP2	NBPFF8
##	9	11	4	10

##	PCDH18	CDK5R2	POC5	CRIP1
##	18	7	9	12
##	CDKN2C	SLC9A7	CDX4	CDY1
##	4	10	5	25
##	PEX5	DDO	TIMM9	CEACAM1
##	1	5	13	9
##	CEACAM3	CEACAM8	CEACAM6	CEBPE
##	6	5	23	22
##	CEBPG	MLLT6	NRF1	CECR5
##	22	21	22	17
##	GNPDA2	ENSG00000215711	RBM24	CELF2
##	6	22	7	21
##	WNT10B	WNT9B	CEND1	CENPE
##	8	8	4	9
##	KIF2C	CENPJ	LAG3	NEUROD1
##	20	24	19	22
##	CEP104	CEP152	CEP170	CLTA
##	25	14	1	1
##	SH3BGRL2	CEP19	RABL2B	CEP192
##	1	11	15	3
##	CEP55	CEP57	GPC3	RCOR3
##	17	12	11	7
##	CEP72	CEP89	CEP97	WNT3A
##	7	21	5	8
##	WNT7A	WNT2	ZFP36L2	CES3
##	8	8	23	12
##	CFHR5	CGB	CGB2	CGB5
##	15	16	22	16
##	FSHB	CGB7	LHB	CGB8
##	16	12	16	16
##	CGGBP1	C21orf59	CHAF1B	DSCC1
##	19	23	23	25
##	EXOSC10	GCC2	POLE3	TBCE
##	25	23	25	25
##	USP5	CHPF	DDI2	EXOSC8
##	25	16	13	8
##	FERMT3	FOXRED1	HIATL1	MPHOSPH6
##	18	14	12	4
##	RRP8	UBE2G2	USP21	ENSG00000206476
##	25	13	16	25
##	ENSG00000205178	ENSG00000205164	ENSG00000205170	ENSG00000205162
##	2	25	15	25
##	CHCHD2	CHCHD2P9	TMBIM4	MAP3K7CL
##	21	3	5	1
##	ENSG00000213709	MPP1	RGMA	ELF5
##	25	8	7	7
##	CHDH	TDRD9	RFX4	MORN3
##	12	13	14	8
##	CHGA	CPB2	CXCL2	MMP3
##	3	11	12	11
##	SERPINB6	ENSG00000212660	KRTAP3-2	MEOX2
##	11	7	7	7
##	CHMP7	CHN1	STK17B	CHP2
##	4	10	6	24

##	CHSY1	CHPF2	CHRD	CHRDL1
##	16	16	22	13
##	CHRNA1	CHRMA2	CHRNB2	CHRNA3
##	21	18	24	3
##	CHRNA5	CHRNB1	CHRND	CHRNE
##	24	10	14	8
##	CHRNG	CHST10	CHST14	CHST5
##	9	1	25	5
##	CHST6	CHST9	GAL3ST3	SULT1B1
##	3	22	13	23
##	SULT1C2	SULT1C4	CHST12	CHST4
##	10	2	12	21
##	CHST8	CHTF8	CHUK	NR2C2
##	19	7	1	1
##	TRIM21	ESRRA	FOXO4	NR0B1
##	7	20	22	22
##	PNRC2	POU4F1	POU4F2	SCGB1D1
##	22	7	25	6
##	SCGB1D2	SP3	TCF20	ZNF398
##	4	22	22	16
##	DLL3	DTX3L	LFNG	MFNG
##	11	22	22	22
##	NR2C2AP	CIAPIN1	IFI6	CIDEA
##	1	22	16	20
##	UCP1	CIITA	ZXDA	ZXDC
##	13	22	3	3
##	PDLIM2	CIT	GRIN2D	ZNF706
##	24	14	14	19
##	NT5DC3	CITED4	TTLL1	CKAP4
##	11	25	7	1
##	GOLGA2	JAKMIP2	TSGA10	SCRT2
##	7	12	16	12
##	MMAA	CLCN2	CLCN7	CLDN7
##	7	12	1	1
##	CLEC11A	CLEC4A	CLEC4F	CLIP2
##	12	5	21	14
##	C1orf63	CLN5	CLPTM1L	CLSTN3
##	8	16	24	3
##	RPGRIP1	TFEB	PICALM	BBS7
##	3	13	13	13
##	CINP	CMC4	CMSS1	FAR1
##	7	22	21	9
##	HTR1B	IFT57	NCDN	OGFR
##	9	7	4	13
##	RAB3GAP1	RAB3GAP2	RPRD1A	VEPH1
##	9	9	25	15
##	YTHDF1	CPOX	POLR1E	SEC24B
##	12	25	25	11
##	WWOX	CNGA2	CNGA4	CNGB1
##	21	13	9	12
##	ABCA4	CNKSRS3	CNN3	CNNM3
##	22	3	9	7
##	CNNM4	CNOT11	GHITM	CNOT6L
##	13	16	3	9

##	CNPY4	CNRIP1	CNST	IL20RB
##	14	12	11	25
##	IL20RA	SIGLEC6	MACF1	CNTN4
##	10	15	14	23
##	CNTNAP3	CNTNAP3B	CNTNAP5	MEFV
##	18	22	3	13
##	COL10A1	COL14A1	COL18A1	MAZ
##	10	19	11	15
##	PLXDC1	TMED9	UCK1	COL20A1
##	16	20	20	12
##	COL23A1	COL25A1	COL4A2	SERpine2
##	21	22	11	11
##	MATN4	COL4A3BP	RTN4	RTN2
##	11	21	14	14
##	UQCRC2	COL4A6	COL5A1	COL6A2
##	5	11	11	12
##	COL6A3	COL8A2	MAG	PLP1
##	11	1	11	11
##	ZNF337	HCN1	IMMP1L	COMM5
##	23	4	23	12
##	COMM6	MBOAT7	TIPARP	COPS3
##	1	21	6	22
##	MYEOV2	COPS7A	DMWD	CORO1A
##	6	7	16	5
##	KREMEN1	SLC27A4	COX5B	KXD1
##	23	9	5	7
##	MT-CO3	KRT83	KRT86	COX7A2L
##	5	17	5	13
##	HBG2	LXN	CPAMD8	THBD
##	20	14	22	11
##	CPEB1	CPLX2	CPM	CPNE6
##	10	13	9	16
##	MYO15A	DFNB31	NDUFC2	ENSG00000172974
##	14	21	20	9
##	TMEM39B	CPSF3L	RAX	SOX3
##	23	7	17	19
##	STAP1	CPT1B	CPVL	CPXM2
##	3	7	14	7
##	CRABP2	PTGS1	CREB3L1	CREB3L4
##	22	14	22	22
##	NFE2	CREBRF	CRH	CRHR2
##	22	18	22	13
##	CRHBP	CRISP1D2	CRIP1P4	SLC25A46
##	15	24	5	14
##	CRISP3	A1BG	ELMO2	TANC1
##	11	15	15	19
##	CRLF1	CRLF2	CRLS1	CRX
##	21	2	13	22
##	M1AP	NRL	CRY2	PER2
##	1	17	14	21
##	CRYAA	CRYBB2P1	CRYBB3	CRYBA4
##	14	14	22	18
##	CRYBB1	MTERF	CSH2	CSN1S1
##	18	19	18	5

##	POU3F1	RAG1	NKD1	VANGL2
##	13	22	14	17
##	FRAS1	KANK2	CSPG5	CSRP2
##	14	10	23	19
##	CSRP2BP	CST3	CTAGE5	CTSS
##	19	11	11	14
##	CST5	CSTA	CSTF2T	ENSG00000206306
##	23	11	3	7
##	CTBP1-AS2	CTBS	CTDSP1	CTDSP2
##	4	11	21	4
##	CTNNBIP1	CTRC	MSH6	NGLY1
##	14	14	17	19
##	PPT1	RPUSD2	SLX1A	TPRKB
##	17	6	3	6
##	CTSB	METAP1	ATP6AP2	PCSK1
##	11	23	15	5
##	WRAP53	GIF	CUL9	CXADR
##	11	11	23	7
##	CXCL3	CXorf40A	CXorf40B	CYB5D2
##	10	19	1	23
##	CYB5R4	NOX1	WIPF3	CYLD
##	15	14	5	14
##	CYP11A1	HSD11B2	CYP17A1	CYP2C9
##	22	20	11	8
##	DHRS3	DHRSX	CYP26A1	CYP26B1
##	14	19	19	19
##	CYP27A1	TTC36	CYP46A1	CYTH1
##	2	12	19	7
##	CYTIP	CYTH4	ENSG00000204964	DACH2
##	6	18	23	22
##	DAGLB	ABHD2	FUBP3	RNF138
##	25	7	10	23
##	DBC1	DBF4	DCLRE1A	MAST1
##	9	25	25	22
##	VGLL1	DCLRE1B	DCP1B	TYR
##	7	20	9	1
##	DCTN4	DCTN5	DCTN6	DDAH2
##	1	19	19	13
##	SMYD3	MDFIC	SCAMP2	STX11
##	22	9	14	13
##	STX1B	VAMP1	DDIT4L	DDX11
##	14	14	17	14
##	DDX12P	DDX19A	PDCD4	RWDD2B
##	23	9	15	4
##	ENSG00000206285	ENSG00000204222	ENSG00000203621	DDX26B
##	25	24	23	17
##	TP53INP1	PHTF2	SPATC1L	DDX58
##	22	14	15	17
##	DECR1	DEDD	DEFA4	MC2R
##	14	24	14	5
##	ENSG00000185918	DEFA6	DEFB103A	DERL3
##	6	3	19	22
##	DESI2	DEXI	DFNA5	DGCR8
##	1	13	5	22

##	CLPS	RECQL4	LRRC70	TRIM39
##	10	22	2	22
##	ENSG00000206419	ENSG00000206495	DGUOK	ALOXE3
##	22	22	18	21
##	BC02	LOX	PCSK2	MAFA
##	10	16	5	12
##	DHRS7B	WDR830S	DHX34	DHX35
##	21	18	5	22
##	DHX57	DHX58	DIP2A	DIP2C
##	17	20	12	16
##	DIRAS2	DIXDC1	DKK3	MSI2
##	14	20	23	22
##	GRID1	SCN4A	LMBR1L	DLG5
##	14	14	3	11
##	NLGN4X	DLK1	DLX1	DLX4
##	14	22	2	4
##	DMP1	DMRT3	DMTF1	DNAH3
##	1	18	9	5
##	DNAI1	PTTG1IP	MAU2	DNAJB9
##	5	15	17	2
##	RFK	DNAJC1	MT1H	PPP1R14B
##	20	5	5	20
##	DNAJC22	DNAJC27	DNAJC7	DNASE2
##	20	13	1	1
##	BEST2	DNLZ	RFWD3	DNM3
##	19	10	20	14
##	EZH1	KCTD15	DNMT3L	TMEM134
##	10	7	4	21
##	TMEM38A	DOCK10	DOCK2	DOCK3
##	19	4	16	16
##	DOCK8	DOCK9	DOK4	RNF128
##	12	13	10	17
##	DPCD	DPEP1	DPH3	SERGEF
##	5	4	1	13
##	DPH6	DPH7	PIGA	PIGP
##	13	8	13	13
##	DPP6	DPP9	DPT	DPY30
##	20	23	4	4
##	LNX2	DPYSL5	RNF11	DSTYK
##	9	10	19	20
##	ENSG00000137313	ENSG00000206499	DUOX2	DUOXA1
##	23	23	14	22
##	DUS2L	DUSP23	WNT10A	WNT2B
##	20	23	8	8
##	WNT5A	WNT6	WNT9A	SPRR2G
##	8	8	8	14
##	TRIM55	GIPC3	WNT3	C7orf34
##	3	14	8	11
##	SERHL2	DYM	TBC1D22B	DYNC2LT1
##	1	19	7	16
##	DYNC2H1	FLG	DYRK4	DYRK3
##	19	14	20	7
##	FASTK	GRK4	GRK7	SHPK
##	7	16	21	7

##	E2F7	EAF1	FAM13C	ZNF444
##	7	25	12	12
##	EAF2	EAPP	EBF1	IP6K3
##	16	21	22	24
##	TDRD6	ZNF423	EBI3	IL27
##	22	8	9	11
##	ECH1	EDA	EDN2	SUOX
##	4	11	1	20
##	PIGU	ENSG00000212868	EFCAB6	EFHC1
##	13	5	11	13
##	EFHC2	EFNA3	ENSG00000214475	EFNB2
##	18	18	11	14
##	EPHA3	PDZRN3	RHBDL2	RUFY2
##	10	1	14	3
##	C1orf116	SLK	EGFL6	EGLN3
##	14	18	14	4
##	NAB1	NAB2	EGR4	IRF4
##	21	13	21	22
##	MEF2D	SOX8	EID2B	EIF3L
##	22	22	10	9
##	CHST13	CMTM6	ORMDL1	TAZ
##	11	5	7	10
##	EIF4EBP2	EIF5A2	ELANE	NOTCH2NL
##	1	23	11	11
##	ENSG00000173487	ELF2	ELL3	ELMOD1
##	24	14	4	19
##	ELP5	ELSPBP1	EMB	EMC9
##	25	7	5	20
##	EMCN	NHLRC2	EMILIN2	EML2
##	23	10	9	3
##	EN1	ENC1	ENDOU	ENDOV
##	22	22	14	18
##	ENG	CHRDL2	FST	ENGASE
##	11	20	11	6
##	ENOPH1	ENOX1	ENSA	ENSG0000023843
##	1	7	8	9
##	ENSG0000051415	MUC7	HTN3	PRH2
##	7	4	6	8
##	PRR4	SMR3B	STATH	ENSG0000079782
##	18	4	11	9
##	MGST2	ENSG00000096087	HGD	UBXN1
##	9	9	8	13
##	HPCA	ENSG00000206290	ENSG00000090269	TYROBP
##	12	24	14	8
##	KLRC3	TREM1	ENSG00000096148	ENSG00000100010
##	8	8	3	22
##	KIAA1191	SLC25A38	ZSCAN16	ENSG00000100262
##	9	9	10	12
##	ENSG00000102050	PTMS	FAM45A	ENSG00000112112
##	12	5	7	24
##	ENSG00000112664	ENSG00000117600	ENSG00000118168	ENSG00000120087
##	9	18	5	22
##	UBN2	LHX4	SSBP3	ENSG00000122854
##	12	23	7	11

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## ENSG00000124435 ENSG00000125976 ENSG00000127150 ENSG00000129586
##          14           21           23           15
##      SH3BP1 ENSG00000136480 ENSG00000137197 ENSG00000137311
##          18            1           14           20
## ENSG00000137321          RPP38          RPP40 ENSG00000137345
##          5            5           5            4
## ENSG00000137397          SMCR7L ENSG00000139617 ENSG00000140660
##          10           6           21            2
## ENSG00000141048 ENSG00000143674 ENSG00000153143          RHAG
##          18           11           20           14
## ENSG00000156035 ENSG00000160296 ENSG00000160629 ENSG00000161853
##          19            6           4            7
## ENSG00000163526 ENSG00000163828          WNT11 ENSG00000164216
##          16           4           8            22
## ENSG00000164917 ENSG00000167674 ENSG00000168452          KRT77
##          25           21           9            10
## ENSG00000168597 ENSG00000168824 ENSG00000169664 ENSG00000170091
##          9            13           12           10
## ENSG00000170161          HSPB6 ENSG00000171427 ENSG00000171656
##          25           14           10           17
## ENSG00000172647 ENSG00000172797 ENSG00000174977 ENSG00000175898
##          8            7           1            14
## ENSG00000176876 ENSG00000177699 ENSG00000177906 ENSG00000179724
##          15           7           4            1
## ENSG00000180152 ENSG00000180574 ENSG00000180860 ENSG00000182314
##          20           11           4            9
## SFTPA2 ENSG00000183214          KLRK1          HCST
##          12           10           11           18
## RAET1E          ULBP1          ULBP2          ULBP3
##          12           11           15           13
## ENSG00000184444 ENSG00000183574 ENSG00000183748 ENSG00000185020
##          11            5           1            18
## SCN1B          SCN3B ENSG00000185065 ENSG00000185602
##          19            5           3            23
## ENSG00000186419 ENSG00000187574 ENSG00000187681 ENSG00000187939
##          19            4           8            10
## SCAP ENSG00000188683 ENSG00000198716          GAGE1
##          10           25           9            25
## GAGE10          GAGE2A ENSG0000068990 ENSG00000198767
##          1            13           24            8
## IKZF5 ENSG00000198843 ENSG00000203622 ENSG00000203623
##          7            7           10            4
## ENSG00000203959 ENSG00000204133          UMOD ENSG00000204517
##          10           22           20            7
## ENSG00000204802 ENSG00000204836 ENSG00000204838 ENSG00000204875
##          7            7           25            13
## ENSG00000204973 ENSG00000205103 ENSG00000206011 ENSG00000206148
##          13           11           1            24
## ENSG00000206156 ENSG00000206226 ENSG00000206230 ENSG00000204258
##          4            20           7            7
## HLA-DQA ENSG00000206294 ENSG00000206292 ENSG00000204273
##          7            7           7            5
## ENSG00000206241 ENSG00000206237 ENSG00000206246 ENSG00000206247
##          12            4           4            22

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## ENSG00000206270		MLH3	NBN	WDR76
## 4	22	1	25	
## ENSG00000206301	ENSG00000206302	ENSG00000206305		P4HA2
## 16	12	4	6	
## ENSG00000206328	GADD45GIP1	RALB	ENSG00000206379	
## 24	22	14	1	
## ENSG00000206385	RNF8	ENSG00000206391		UBTD1
## 1	22	19	22	
## ENSG00000206454	FOXD3	ENSG00000206456	ENSG00000206457	
## 22	22	7	16	
## ENSG00000206459	GABRA6	ENSG00000206484	ENSG00000211608	
## 20	3	24	23	
## PAX1	ENSG00000212676	ENSG00000212842	ENSG00000212862	
## 13	12	13	22	
## ENSG00000212870	ENSG00000212875	ENSG00000213054	ENSG00000213496	
## 20	5	13	22	
## ENSG00000213784	ENSG00000214332	ENSG00000214882		KMT2E
## 24	20	12	10	
## ENSG00000215232	ENSG00000215361	ENSG00000215377	ENSG00000215522	
## 9	22	5	18	
## ENSG00000215579	ENSG00000215632	ENSG00000215670	ENSG00000215691	
## 22	5	22	11	
## ENSG00000215698	ENSG00000215757	ENSG00000215767	ENSG00000215770	
## 3	10	8	1	
## SIRPA	ENTHD2	NT5C2	ENTPD2	
## 24	8	20	9	
## EPDR1	EPG5	EPHA6	ERAP1	
## 7	5	18	4	
## SOX11	PCLO	PTRF	ERG	
## 11	4	12	22	
## ERGIC1	ERGIC2	ERI2	ERI3	
## 23	8	10	24	
## ERP27	ESD	ESM1	ESPN	
## 7	20	22	5	
## EXT2	PPARGC1A	ISL2	PECR	
## 1	22	9	4	
## FOSB	ESRRG	SCGB2A2	ESYT1	
## 22	22	20	3	
## ETNK2	ETNPP1	ETV4	EVC2	
## 23	14	23	5	
## ABHD13	ATHL1	GRHPR	HAO1	
## 14	3	13	13	
## HLCS	MPV17	PDXK	PIGC	
## 9	7	25	13	
## PIGL	ROMO1	SLC16A9	EXTL1	
## 13	4	7	16	
## EXT L3	EYA4	RC3H1	F13B	
## 16	7	23	11	
## SERPINA10	VWF	IGFBP3	F8A1	
## 23	11	11	4	
## F8A2	F8A3	ADAMTS13	FABP5	
## 20	19	18	20	
## FADS1	FAF1	FAM102A	FAM103A1	
## 24	24	14	13	

##	FAM105B	FAM115A	FAM120A	FAM127B
##	9	9	1	24
##	FAM131A	FAM131C	FAM136A	FAM150B
##	11	20	6	20
##	ATRNL1	FAM154A	FAM161A	FAM175B
##	6	1	5	16
##	FAM188A	FAM193B	FAM195A	FAM208A
##	22	15	19	12
##	FAM20A	FAM213A	FAM214B	FAM32A
##	17	10	18	25
##	FAM46D	FAM47E-STBD1	FAM50A	FAM50B
##	22	4	3	17
##	FAM57A	FAM63A	FAM83G	FAM86A
##	23	15	14	5
##	FAM89A	FAM90A22P	RGS13	FAN1
##	7	10	2	25
##	FARP2	FARS2	FARSB	FASTKD5
##	6	19	19	1
##	FBLIM1	FBLN5	LTBP2	SOD3
##	9	7	8	6
##	FBXL2	FBXL3	FBXL5	FBX021
##	15	17	19	23
##	FBX025	FBX03	FBX04	FBX044
##	16	5	22	9
##	FBX05	FBX08	NUPR1	FCHO1
##	13	2	17	2
##	ENSG00000204326	FCN3	MRPL45	FEM1C
##	9	11	23	23
##	SKAP2	TRPV4	FEZ2	NEK1
##	10	18	16	14
##	NEO1	OTP	TRAPP13	PPP2R5D
##	16	9	16	10
##	FFAR1	FFAR3	FGD1	PHEX
##	14	10	4	10
##	FGFBP1	IGFALS	FIBP	RNF32
##	7	11	3	23
##	FIG4	FITM2	FIZ1	FKBP6
##	13	2	22	16
##	FKBP7	FKBPL	SEMA3A	SEMA3B
##	7	17	9	8
##	SEMA3C	FLT3LG	FLT4	FMO3
##	5	4	10	20
##	FMO4	FMO6P	FOLR2	EN2
##	19	8	9	17
##	ONECUT1	T	FOXC1	FOXD4L3
##	18	22	2	8
##	FOXK1	FOXN3	FOXP2	FOXS1
##	5	10	22	2
##	FRMD4A	FRMD4B	FRMPD1	FSCN2
##	16	6	16	3
##	FSD1	FUT3	FUT5	FUT6
##	25	24	20	20
##	FUT8	MGAT4A	MOGAT3	MGAT5
##	4	4	4	19

##	FUZ	RSG1	FXYD2	FXYD3
##	22	15	17	8
##	FYTTD1	IGFBP4	GABRA4	GABRG1
##	8	11	3	3
##	GABPB2	GABRA5	GABRD	GABRR1
##	1	13	7	14
##	P2RX2	SLC39A3	GABRR3	SLC39A2
##	14	14	17	1
##	GAL	GALR3	GALK1	SMC5
##	9	17	4	23
##	GALR1	GALR2	TM9SF4	GAP43
##	12	10	13	14
##	GAS2L1	GAS2L2	TLX3	TEKT2
##	11	24	24	22
##	TMEM216	CAMTA2	GATA5	GBGT1
##	9	10	19	20
##	GCAT	TDH	GCGR	GCHFR
##	6	20	11	5
##	GDAP2	GDE1	GDF6	GDPGP1
##	24	23	9	20
##	GFI1	LAMC3	GFRA1	ST8SIA3
##	16	17	8	13
##	GGCT	GGCX	PROZ	GGH
##	24	11	11	7
##	GGNBP2	GGPS1	GH2	GHRH
##	10	13	12	13
##	GPR83	GIMAP4	GINS2	GINS3
##	5	20	6	25
##	TMTC4	GJA4	GJB2	GJB6
##	14	21	21	21
##	GK5	GLA	GLCE	GLIS3
##	7	4	6	7
##	GLP1R	GLP2R	GLRA3	ZCCHC14
##	14	14	22	4
##	GLRX2	GLYATL1	RGS9	GM2A
##	8	21	21	22
##	HEXA	GMIP	HOXA11	HOXA7
##	22	19	4	1
##	HOXC9	HOXD10	NCF1C	HOMEZ
##	21	12	14	5
##	NCF4	PTGER3	PTGER2	PNOC
##	14	14	7	23
##	CNR2	HTR2B	LTB4R	STT3A
##	7	14	11	1
##	ENSG00000197800	GNAT1	GNRH1	GNRHR
##	23	7	11	12
##	GNS	NFXL1	RAB1B	ZNF594
##	14	16	14	7
##	GOLGA5	MCF2	MTMR7	GOLGB1
##	4	16	19	4
##	NDUFA1	SLC2A3	HAMP	GOLPH3L
##	3	3	2	13
##	SGK2	GPATCH1	GPBP1	GPBP1L1
##	13	4	4	18

##	GPN2	GPNMB	GPR124	GPR151
##	9	24	14	20
##	GPR17	GPR26	GPR84	GPRIN1
##	3	19	24	20
##	GPSM3	GRHL2	GRHL3	GRIA4
##	12	14	12	14
##	GRID2IP	GRIK4	GRINA	GRXCR2
##	14	19	15	20
##	GSAP	GSC2	PET112	WDR7
##	15	12	18	1
##	TBC1D24	GSTO2	UBXN7	GSX2
##	16	9	13	9
##	ZNF202	GTF2IRD1	GTPBP1	GUCA1A
##	5	22	17	8
##	GUCA1B	GUCA2B	GUCA2A	GYG2
##	15	10	11	12
##	GPC	H2AFY	H6PD	HAGH
##	16	3	14	6
##	HAGHL	HAUS1	HAVCR1	HBG1
##	16	22	7	20
##	HPB1	RASSF5	MAP7	HCN2
##	22	20	3	1
##	NPFFR2	NPFF	HCRTR1	HDDC3
##	19	10	22	22
##	HEATR5B	HELQ	HERPUD2	HESX1
##	1	5	23	16
##	HEXB	CHIT1	ZBED1	HFE2
##	20	4	7	12
##	SPINT2	ITIH3	HHLA1	HHLA3
##	20	15	8	20
##	HIC1	HIC2	SSX4B	NUCB2
##	22	21	11	16
##	HIGD1B	HINT2	ARHGAP44	HN1L
##	19	14	24	20
##	RABL3	HNF1B	TMX3	ENSG00000204155
##	18	22	6	20
##	HNRNPCL1	SHARPIN	ENSG00000213603	HOXA2
##	16	14	14	16
##	HOXB13	HOXB4	HOXC13	HOXD11
##	12	22	12	16
##	HOXD9	HPN	HPS3	HPS5
##	9	16	8	3
##	HPS1	HPS6	HS3ST3A1	HSCB
##	24	18	7	7
##	HSDL1	HSDL2	HSF1	NACC1
##	2	22	1	11
##	HSF2BP	HSFX1	HSPA13	IFT27
##	24	7	8	24
##	HSPB7	HTN1	MUC5B	HTR1D
##	2	4	1	19
##	HTR1F	HTRA2	XAF1	IDO1
##	9	24	24	4
##	HUS1B	RAD9B	HYAL2	HYLS1
##	3	22	2	9

##	IBTK	ICAM5	ICOS	IFI16
##	9	11	24	22
##	OLIG1	ID4	IGFBP1	IDNK
##	16	22	11	19
##	IDS	ANKRD34A	IFFO1	IFI35
##	14	21	1	21
##	IFIH1	IFIT2	IFIT5	IFITM2
##	20	13	8	19
##	IFNA7	IFRD2	IFT140	IFT172
##	11	24	13	12
##	IFT80	MTRR	IGFBP6	IGFN1
##	4	7	20	1
##	IGHG3	IGLC1	IGLV2-23	IGSF1
##	1	19	23	7
##	IGSF21	NREP	IGSF9	IL12RB2
##	4	4	8	10
##	IL17B	IL25	IL18BP	IL18R1
##	6	6	24	24
##	IL18RAP	IL1RAP	IL1RL2	IL5RA
##	24	24	14	10
##	PHIP	INCA1	TAF9BP2	INPP4A
##	4	1	25	9
##	INPP4B	INPP5A	INPP5B	INSIG1
##	12	10	22	4
##	INSRR	INTS8	INTU	IQUB
##	20	9	8	4
##	IRAK1BP1	IREB2	IRF2	IRX3
##	10	12	5	16
##	ISG15	UBA7	ISG20L2	ISOC2
##	21	24	7	19
##	ITGA3	LGALS8	RAB1F	ITIH2
##	11	24	19	12
##	ITIH4	ITLN1	ITM2A	ITPR1PL1
##	21	23	25	16
##	IYD	JMJD1C	JMJD7-PLA2G4B	JPH2
##	14	20	23	25
##	FCRL3	RASSF9	KANK1	LRCH1
##	22	2	4	18
##	KATNB1	KCNA3	KCNA4	KCNA6
##	6	14	14	2
##	KCNB1	KCNG1	KCNG2	KCNG3
##	19	22	23	23
##	KCNG4	KCNS3	KCNV1	KCNV2
##	7	25	19	20
##	KCNC1	KCNB2	KCNC2	KCND1
##	25	17	23	5
##	KCNE2	KCNE4	KCNF1	KCNH1
##	23	20	20	12
##	KCNH5	KCNIP2	KCNIP4	KCNJ10
##	6	1	22	2
##	KCNK2	KCNQ3	KCNQ4	KCTD10
##	18	14	7	6
##	RWDD4	KCTD3	KCTD4	KDM1B
##	7	8	13	3

##	KDM4A	KDM8	KEL	KIAA0100
##	25	12	4	8
##	KIAA0196	KIAA0556	KIAA1009	KIAA1107
##	3	8	14	15
##	KIAA1161	KIAA1731	KIDINS220	KIF13A
##	17	7	14	17
##	KIF16B	KIF3C	KIFAP3	RBFOX1
##	1	5	9	7
##	KIFC2	KIFC3	KIRREL2	KIRREL3
##	5	3	10	20
##	NPHS2	KISS1	KISS1R	KLF1
##	20	11	1	19
##	KLF16	KLF3	KLHDC4	KLHDC9
##	6	22	12	12
##	KLHL2	KLHL20	KLHL5	KLHL9
##	7	4	22	2
##	KLK4	KLK5	KLRC2	KLRG1
##	7	8	7	8
##	SLC12A1	SLC12A2	TMEM37	KRT2
##	11	1	10	22
##	KRT32	KRT33A	KRT35	KRT36
##	13	2	16	15
##	KRT37	KRT38	KRTAP10-6	KRTAP11-1
##	7	4	11	2
##	KRTAP19-2	KRTAP19-5	KRTAP9-3	KRTAP9-8
##	19	3	14	22
##	KTN1	L1CAM	LACRT	LACTB2
##	6	16	11	12
##	LAMA1	LAMA2	LAMB3	LAMB2
##	11	11	11	24
##	LAMC2	LAMTOR2	LRRC6	LANCL2
##	11	3	16	20
##	LATS2	LBP	LCN1P2	LCN2
##	18	11	20	16
##	LDB1	RLIM	SSBP2	SSBP4
##	22	22	9	25
##	FKBP9	LETM2	LETMD1	VPREB3
##	13	15	13	11
##	LGALS7	LGALS7B	LHPP	NEIL1
##	5	5	10	21
##	LIM2	LIMS2	LIN28B	LINC00521
##	7	8	3	15
##	LINC00846	LLPH	LMCD1	LMTK3
##	8	11	11	5
##	LNPEP	LOXHD1	LRAT	LRBA
##	3	3	24	21
##	LRG1	LRP3	LRR1	LRRC1
##	22	8	13	9
##	LRRC16A	LRRC48	LRRC4C	LRRC58
##	15	23	7	15
##	ANKMY2	RPL12P4	LRRFIP1	LRRN4
##	14	5	21	6
##	MC4R	LSS	LTBP3	NAAA
##	5	13	11	13

##	RASGRF2	LY6G6F	LY9	LYRM4
##	10	24	21	13
##	LZTR1	MAB21L2	NRXN2	PLXND1
##	10	12	14	11
##	TANG06	NDUFS4	MAFF	MAGEA12
##	10	14	22	17
##	MAGEA6	MAGEB16	MAGEB18	MAGEB4
##	6	4	13	9
##	MAGED2	MAGEH1	BTBD3	SEMA4A
##	22	4	19	14
##	SPOCK2	MAML3	MAN2A1	MAN2A2
##	5	15	8	4
##	MAP1LC3B	PAX2	MAP4K3	MAP4K4
##	13	22	11	24
##	GBP3	KLHL18	MAP7D2	NUDT9
##	16	25	5	22
##	MAPRE2	MAS1	MAST4	MASTL
##	9	9	18	2
##	MATN3	MBD5	MBD6	MBTPS2
##	24	9	21	4
##	MCHR1	MCHR2	TUBB3	MC5R
##	5	12	2	5
##	MCAM	MCCC1	MCF2L2	MCFD2
##	18	20	23	23
##	RIMBP2	RNF38	MEA1	MECP2
##	24	13	3	22
##	MEF2BNB-MEF2B	MEMO1	PRICKLE1	METAP1D
##	24	12	8	5
##	METTL14	METTL16	METTL17	METTL21C
##	23	15	1	21
##	METTL24	MEX3B	MFAP1	PRPF38A
##	12	17	8	8
##	MFAP2	MFAP5	MFF	MFSD1
##	11	11	7	6
##	MFSD10	MGLL	MGST1	LTC4S
##	19	10	9	9
##	MIB2	MICA	MICALL2	MIP
##	14	3	16	8
##	MIS12	MIS18A	MIS18BP1	MKK5
##	22	11	22	16
##	MKL1	MKRN1	MKS1	MLF1
##	5	21	16	3
##	MLN	MMEL1	MMP19	MMP20
##	22	16	15	12
##	MMP24	DIO2	MMP25	MMRN1
##	1	21	4	16
##	MN1	MNF1	MNS1	UBAP2
##	6	20	21	1
##	MOV10	MOV1OL1	MOXD1	MPC1
##	18	20	6	14
##	MPC2	MPHOSPH8	MPP4	MPP7
##	15	21	1	8
##	TMEM203	MPZL1	MRC1	MRC2
##	8	13	25	6

##	1	12	15	15
##	MRPL16	MRPL18	MRPL28	MRPL30
##	10	20	18	6
##	MRPL37	MRPL47	MRPL54	MRPS30
##	18	20	22	4
##	MRPS5	MSL3	MSR1	MSRA
##	15	13	1	24
##	MSX1	MT-ND5	MT1A	MT1F
##	22	20	24	2
##	MT1G	MTAP	MTBP	MTCH1
##	1	14	25	20
##	MTG2	MTHFD2	MTMR11	MT01
##	23	1	5	13
##	MTSS1	MUC5AC	PROL1	MUSK
##	4	4	25	8
##	MX1	TRPC7	MXD4	TCP10L2
##	14	18	3	5
##	MYH13	MYH7	MYH8	MYLIP
##	16	6	14	20
##	MYO10	PLA2G10	MYO3A	MYOD1
##	14	10	14	22
##	BHLHE41	CIB2	MYOT	MYRIP
##	22	10	9	12
##	MZT2B	N4BP1	N4BP3	NADK2
##	2	15	15	22
##	YIPF6	NACP8	NAPB	NARS2
##	8	16	23	8
##	NAT8	NAV1	NBEAL1	NBL1
##	24	22	14	4
##	NBPF11	NBPF23	ENSG00000134075	NTF3
##	8	24	12	18
##	NCR2	NDFIP1	NDST2	NDUFAF3
##	1	19	10	22
##	NDUFB1	NDUFB10	NDUFB3	NDUFB5
##	2	14	4	23
##	NDUFV1	NDUFV3	NEBL	NECAB2
##	16	23	23	7
##	CENPO	GTPBP10	NECAB3	NEDD8
##	7	24	19	22
##	PARP1	SENP8	PARP2	NEIL2
##	21	25	2	23
##	NEK3	NEK7	NEU1	NEURL
##	10	9	19	22
##	NEURL2	NEUROD2	NEUROD6	NEUROG1
##	24	1	14	22
##	NEUROG2	NFAT5	NFE2L3	NFIA
##	8	14	22	20
##	NFIX	NFKBIZ	NHEJ1	NICN1
##	3	1	7	10
##	TPGS2	NIPA2	NIT2	NKAIN1
##	16	21	2	8
##	NLRP12	DYDC2	NOMO3	NOSIP
##	13	4	3	9

##	NOTCH4	NPAS4	NPBWR1	NPB
##	22	16	10	22

##	NPBWR2	NPFFR1	NPHP4	NPM3
##	19	20	3	4
##	NPNT	NPR3	NPPB	NPY5R
##	10	10	17	8
##	NR1D1	NR2E1	NR3C2	PSMC3IP
##	22	20	22	17
##	NR4A2	RMND5B	NR4A3	NRD1
##	22	22	22	6
##	PDYN	NRG4	NRGN	NRSN1
##	19	6	22	21
##	SPINK1	TMPRSS15	NRSN2	NSL1
##	12	16	24	22
##	NT5DC2	NTN4	NTNG1	NTNG2
##	24	18	9	12
##	NTS	NLN	NTSR2	NUDCD2
##	19	10	10	13
##	NUDCD3	NUDT10	NUP2	NUP62CL
##	2	24	22	12
##	RGS10	NUSAP1	NXF2B	NXT2
##	14	5	11	3
##	NXN	NXPH1	NXPH2	NXPH3
##	1	14	16	25
##	NYNRIN	OASL	OAZ3	OCLN
##	2	22	14	18
##	OCM2	ODF1	ODF2	OLFM1
##	13	3	3	24
##	OLFM2	NBAS	OLFM3	OLFML3
##	20	4	11	4
##	OLIG3	OLR1	OPHN1	OPN1LW
##	25	24	20	3
##	OPRK1	OPTC	OPTN	OSBP2
##	5	11	4	17
##	OSTF1	OSTM1	OTOF	OTUD5
##	24	14	15	16
##	OTUD7A	OXSM	P2RX1	P2RX3
##	8	22	14	11
##	P2RX5	P2RY12	P2RY2	PABPC3
##	6	5	11	13
##	PACRG	PAG1	PAIP2	PAK1IP1
##	12	17	4	15
##	PANX1	PAPD4	RCAN3	PARGP1
##	14	25	14	8
##	PARP9	PASK	CDH24	PBX3
##	4	7	7	22
##	PCBD2	PCDH17	PCDH8	PCDHB5
##	20	16	18	11
##	PCGF2	PCIF1	PCMT	PCNXL4
##	4	22	14	14
##	PDE11A	PDPN	PEBP4	PELI1
##	22	14	2	20
##	PELI3	PER3	PEX11A	TIMM10B
##	22	22	14	13

##	PFN1	PGAP3	PGM5	PHAX
##	4	13	24	16

##	PHF2	PHF23	PHF6	PHF7
##	3	3	1	20
##	PHKA2	PHLDB2	PHYHIPL	PIGH
##	14	14	21	13
##	PIGQ	SLC16A12	PIGR	PIK3AP1
##	13	6	11	10
##	PITHD1	PITPMC1	PIWIL1	PIWIL2
##	10	14	21	23
##	PJA2	PKD1	PKD2L1	PKIA
##	8	1	6	10
##	PKNOX2	PLA2G16	PLA2G7	PLA2R1
##	14	12	20	19
##	PLAGL1	PLB1	PLCL2	PLEKHA1
##	17	2	18	21
##	PLEKHB2	TIMM8B	PLGRKT	PLOD2
##	3	23	9	18
##	PLXNA2	HACE1	KIAA1199	PTK7
##	8	9	21	14
##	PLXNB2	RND1	ROBO1	SPTSSA
##	14	22	13	5
##	PMM1	PMP22	PMS1	PNPLA2
##	6	1	23	9
##	PNRC1	POGZ	STK40	POLQ
##	22	16	12	15
##	HDX	PPM1E	TP73	POMT1
##	5	4	22	11
##	POP5	POU3F4	POU5F1	PPCS
##	5	11	22	7
##	PPEF1	PPFIBP1	PTPRT	SNX19
##	14	4	20	21
##	ZMYND19	PPP1R36	PPP2R2D	PPP2R3B
##	9	12	22	16
##	PPY	PQLC2	PRAME	PRB2
##	19	13	23	5
##	PRDM12	PRDM4	PRDM8	PRELP
##	10	22	18	11
##	PRF1	PRIMA1	PRLH	PRMT10
##	24	1	7	17
##	PRND	PROCR	PROM1	PROP1
##	6	7	18	15
##	PRPF38B	PRPH2	ROM1	PRR14
##	15	8	16	20
##	PRR5L	PRUNE2	PRX	PSD
##	19	5	24	8
##	GMFG	PSG5	PSMB10	PSMG2
##	22	20	7	6
##	PSORS1C2	PTAR1	PTBP3	PTCD1
##	5	4	5	22
##	PTGR1	PTPLB	PTPMT1	PTPN23
##	13	22	7	17
##	PTPN9	PTPRG	PTPRM	PTPRN2
##	24	19	4	21

##	PTPRZ1	PVRL4	PXDN	CD207
##	4	14	1	19
##	PXMP2	PYGO1	CCDC127	SPRTN

##	22	3	1	19
##	QSOX1	RAB13	RAB26	RAB27B
##	18	24	18	11
##	SYTL4	UNC13D	RAB2B	RAB31
##	14	18	22	7
##	RAB32	C10orf11	RAB38	RAB3IL1
##	14	4	22	7
##	RAB8A	RRAGA	RABGEF1	RAD51AP1
##	4	10	13	11
##	RAET1G	RAI1	RANBP10	THSD7B
##	11	22	7	22
##	RAPGEF2	RAPGEF3	RARB	RARG
##	18	5	22	22
##	RARRES3	RASGEF1C	RASGRP2	FAM118B
##	1	11	10	1
##	RBCK1	RBM11	RBM42	RBMXL2
##	3	11	17	21
##	RBMY1F	RBMY1HP	RBP2	RBP3
##	13	19	24	9
##	RBP4	RCAN2	RCBTB2	RDH5
##	2	1	10	2
##	RGR	REEP2	REEP6	REG1A
##	11	19	12	14
##	SPEF1	RETN	RFFL	RGL4
##	4	19	11	14
##	RGPD5	RGS11	RGS16	RGS17
##	20	19	14	4
##	RGS9BP	RHEBL1	RHOF	RHOJ
##	20	22	10	22
##	RHOU	RIN2	SLC13A2	RIOK3
##	8	8	8	17
##	RLBP1	RLN1	RLN2	RXFP1
##	21	11	15	12
##	RLN3	RXFP4	RMDN1	RMND1
##	12	13	15	14
##	RNASE1	RNASE2	RNF111	RNF114
##	15	7	22	11
##	RNF13	RNF135	RNF141	RNF144A
##	5	12	13	19
##	RNF167	RNF183	RNF208	RNF34
##	1	1	7	22
##	RNF41	RNF6	RNF7	RNPEP
##	14	2	24	8
##	SRGAP2	ROGDI	ROPN1	SPA17
##	14	14	1	8
##	RP9	RPL10L	RPL7L1	RPP25
##	2	17	1	5
##	RPRD2	ABHD17B	TOB2	RRAGD
##	25	3	18	11
##	RRM2B	RRP7A	RSPRY1	RTDR1
##	22	3	12	24

##	RUNX3	S100A12	S100Z	S1PR1
##	22	20	20	14
##	SAMD14	SAMD3	SAMD4B	SAP30BP
##	o	o	o	o

##	SCAF11	SCAI	ZBTB5	SCAMP3
##	21	25	10	6
##	SCAMP5	SCAND1	ZKSCAN7	ZSCAN20
##	1	7	15	17
##	ZSCAN21	ZSCAN32	SCG2	SCG5
##	8	7	4	5
##	SCGB2A1	SCGN	SCN10A	SCN2A
##	18	1	13	13
##	SCN4B	SCN2B	SCNM1	SCNN1D
##	13	15	25	16
##	SCNN1G	SCOC	SCYL3	SDR39U1
##	14	14	5	10
##	SEC14L1	SEC14L2	SEC23B	SEC23IP
##	20	2	8	10
##	SEC24C	SECISBP2L	SEMA3E	SEMA4D
##	20	25	21	13
##	SEMA6A	SERINC1	SERINC3	KDELR2
##	1	21	12	15
##	SERP2	SERPINA7	SERPINB12	SERPINF1
##	13	22	18	16
##	SETD5	SEZ6	SFT2D1	SFTPA1
##	7	25	17	14
##	SFTPB	SFTPD	MFAP4	SFXN4
##	19	11	22	16
##	SGOL1	SGSM3	SH2D1B	SH2D3C
##	14	22	10	25
##	SH3D19	SH3PXD2A	SH3RF3	SHC2
##	23	18	22	10
##	SHD	SHROOM4	SIGLEC1	SIGLEC11
##	5	15	24	19
##	SIPA1	SIPA1L3	SIRPB1	SIRPG
##	10	23	11	19
##	SIRT7	SIX5	SLAMF6	SLC12A5
##	13	10	10	16
##	SLC15A2	SLC16A8	SLC17A9	SLC18A2
##	7	9	13	18
##	SLC1A1	SLC1A2	SLC1A3	SLC22A1
##	24	5	1	5
##	SLC22A2	SLC22A24	SLC23A1	SLC24A1
##	11	5	11	3
##	SLC24A4	SLC24A6	SLC25A20	SLC25A21
##	1	4	5	17
##	SLC25A39	SLC25A51	SLC27A1	SLC29A1
##	17	5	2	12
##	SLC2A13	SLC30A3	SLC30A4	SLC31A1
##	13	20	15	9
##	SLC35B4	SLC35C2	SLC37A1	SLC37A2
##	24	13	24	3
##	SLC38A3	SLC39A10	SLC39A11	SLC3A1
##	20	10	22	13

##	SLC44A2	SLC45A1	SLC4A10	SLC4A4
##	19	15	21	16
##	SLC4A8	SLC50A1	SLC6A2	SLC7A2
##	22	1	11	17

##	SLC7A3	SLC7A7	SLC7A8	SLC7A9
##	3	12	11	7
##	SLC9A2	SLC9A4	SLC9A5	SLC05A1
##	16	24	8	14
##	SLIT1	SMEK1	SMG5	SMG7
##	13	25	9	7
##	SMIM11	SMIM14	SMTN	SLC38A2
##	14	17	20	2
##	SYCN	SNPH	SNRNP48	SNRNP27
##	22	24	21	22
##	SNTB2	SNX12	SNX13	SNX15
##	14	4	2	10
##	SNX27	SNX33	SOAT2	SORCS1
##	12	7	18	18
##	SOX4	SOX7	SOX9	SP140
##	3	22	1	13
##	SPAG4	SPATA20	SPCS2	TEFM
##	3	3	4	3
##	SPINK7	ENSG00000198009	SPINT1	SPRR3
##	10	1	22	20
##	SPRY4	SPSB4	SPTBN2	SPTBN4
##	23	20	12	9
##	SRCIN1	SRD5A2	SRGAP1	SRGAP3
##	14	3	12	20
##	SRRT	SS18L1	SSFA2	SSH2
##	4	12	12	19
##	SSR2	SSTR1	SSX1	SSX2B
##	9	14	25	12
##	SSX3	SSX7	ST3GAL1	ST6GALNAC4
##	9	4	20	20
##	ST6GALNAC5	ST8SIA1	ST3GAL5	ST3GAL6
##	12	3	3	10
##	B3GNT2	ST8SIA5	ST6GALNAC1	ST8SIA2
##	15	25	4	13
##	ST8SIA4	STAMBP	ALAS1	AMN
##	10	19	23	25
##	FAM73B	PXK	STARD3	STIM1
##	19	19	19	6
##	STK11IP	STK32C	UHMK1	STRBP
##	19	3	22	23
##	STRIP2	STS	STX17	STXBP6
##	9	3	8	14
##	STYX	SULF2	SULT2A1	SULT4A1
##	22	16	23	25
##	SURF2	SUSD1	SUSD2	SUZ12
##	11	4	10	22
##	SV2C	SVEP1	SWAP70	SWT1
##	10	22	14	21
##	SYNGAP1	SYT14	SYT2	SYT4
##	14	21	14	18

##	SYT8	SYTL1	SYTL2	TAC1
##	11	14	10	4
##	TAF1C	TAF5L	TAL2	TATDN3
##	23	25	22	5
##	TBC1D1	TBC1D15	TBC1D20	TBC1D9

##	1	10	9	25
##	TBCC	TBCD	TBL1Y	TBL2
##	6	10	20	24
##	TBX19	TBX20	TBX21	TBX6
##	1	25	9	12
##	TCF23	TCF7	TCF7L1	TCHH
##	23	9	11	7
##	TCIRG1	TCTA	TEAD2	TECPRI
##	22	7	3	22
##	TEKT4	TERF2	TEX28	TEX9
##	7	1	12	3
##	TFB1M	TFEC	TFF1	TGFBRAP1
##	12	11	13	16
##	TGIF2	TGM1	TGM3	THAP8
##	7	3	7	18
##	THOC3	THPO	THSD1	THUMPD3
##	25	23	22	21
##	THY1	TIAM2	ZCCHC11	TIGD6
##	11	8	10	9
##	TIMM8A	TKTL1	TLK2	TLR7
##	13	14	14	14
##	TLR8	TLX1	TLX2	TM7SF2
##	20	21	3	4
##	TM9SF2	TMA16	TMBIM1	TMCC1
##	4	20	13	11
##	TMC06	TMED1	TMEM102	TMEM120A
##	6	25	24	9
##	TMEM132D	TMEM139	TMEM19	TMEM223
##	9	3	24	25
##	TMEM230	TMEM9	TMEM241	TMEM53
##	4	24	17	10
##	TMEM56	TMEN57	TMEM62	ZNF287
##	22	16	10	19
##	TMEM64	TMEM68	TMEM70	TMEM87A
##	13	22	25	17
##	TMEM97	TMEM9B	TMPRSS11E	TMT2
##	13	1	11	25
##	TMTC3	TNFRSF11A	TNFRSF11B	TNFRSF12A
##	11	24	24	24
##	TNFSF18	TNFRSF4	TNFSF4	TNFSF13
##	9	24	24	24
##	TNFSF13B	TNFRSF13C	TNFSF15	TNFSF8
##	20	22	3	10
##	TNFSF9	TNNC1	TNNI2	TNNC2
##	6	24	19	17
##	TNNI3K	FUK	TNP02	TOR1A
##	20	14	10	17
##	TOR1AIP2	TOR1B	TP53I3	TP63
##	23	23	4	22

##	TPBG	TPK1	TPRG1L	TRAK1
##	7	6	21	7
##	TRAPPC6A	TRAPPC9	TREM2	TREML1
##	7	8	25	7
##	TRHDE	TRIM16L	TRIM17	TRIM3
##	6	4	22	12

##	ZFHX4	TRIM46	TRIM54	TRIM58
##	19	11	11	14
##	TRIM62	TRIM63	TRIOBP	TRIP6
##	22	3	20	7
##	AFAP1L1	TRPM2	TSACC	TSEN15
##	7	6	22	20
##	TSEN54	TSNAXIP1	TSPAN11	TSPAN15
##	20	8	10	1
##	TSPAN33	TSPYL1	TSSC4	TSSK4
##	19	24	15	18
##	TSTA3	TTC17	TTC28	TTC7B
##	1	22	9	22
##	TTLL5	TUBA1C	TUBGCP3	TWF1
##	12	13	17	18
##	TXNDIC17	TXNL1	TXNRD3	TYMP
##	10	24	8	20
##	TYRP1	UBA5	UBE2Q2	UBASH3B
##	7	4	6	19
##	UBE2G1	UBE2Z	UBE4A	UBR3
##	14	20	24	2
##	UBXN4	UBXN6	UCN2	UCN3
##	3	7	2	9
##	UCP2	UIMC1	UNC5C	UPRT
##	14	22	24	10
##	URB2	USH1G	USMG5	USP20
##	22	16	9	2
##	USP31	USP43	USP53	USP9Y
##	14	17	16	12
##	UTF1	UTP23	UXT	VAPB
##	16	15	22	14
##	VGLL4	VIPAS39	VNN1	VNN3
##	22	7	22	7
##	VPS13B	VPS13D	VPS33B	VPS36
##	2	22	12	19
##	VPS37A	VPS37C	VPS41	VPS4A
##	19	16	13	1
##	VRK3	VSX2	VTI1B	WDPCP
##	12	22	13	1
##	WDR18	WDR25	WDR55	WFDC2
##	19	12	17	7
##	WIBG	WISP1	WNT8A	WNT8B
##	21	23	8	8
##	WTIP	WWC2	WWC3	XAGE1B
##	10	18	3	14
##	XAGE1C	XAGE1D	XAGE1E	XAGE2B
##	10	15	12	14
##	XCL1	XCR1	XCL2	XIRP2
##	20	16	8	5

##	XRCC6BP1	XYLT2	YIPF3	YIPF4
##	23	22	7	7
##	YLPM1	ZBTB11	ZBTB14	ZBTB21
##	4	7	24	20
##	ZBTB18	ZBTB2	ZBTB32	ZBTB8B
##	22	9	3	8

##	ZNF276	ZC3H13	ZC3H7A	ZC3H7B
##	23	24	12	16
##	ZCCHC8	ZDHHC15	ZDHHC16	ZDHHC23
##	7	16	9	24
##	ZDHHC3	ZDHHC4	ZEB2	ZFHX3
##	24	19	22	23
##	ZFP2	ZFR	ZFYVE20	MRPS18C
##	12	12	13	23
##	ZG16B	ZGPAT	ZHX2	ZIC4
##	7	21	16	16
##	ZNF598	ZMAT4	ZMYND10	ZNF101
##	24	16	6	20
##	ZNF136	ZNF17	ZNF2	ZNF205
##	10	5	6	11
##	ZNF208	ZNF211	ZNF230	ZNF239
##	22	21	7	5
##	ZNF251	ZNF274	ZNF326	ZNF329
##	16	5	1	23
##	ZNF335	ZNF346	ZNF382	ZNF384
##	3	3	16	19
##	ZNF41	ZNF439	ZNF44	ZNF440
##	14	7	18	7
##	ZNF510	ZNF516	ZNF518A	ZNF557
##	12	2	25	22
##	ZNF558	ZNF559	ZNF584	ZNF670
##	23	11	16	19
##	ZNF679	ZNF691	ZNF707	ZNF764
##	16	4	11	7
##	ZNF83	ZNFX1	ZNHIT6	ZNRF2
##	7	15	25	4
##	ZPBP	ZSCAN2	ZSCAN4	ZSCAN5A
##	13	24	11	14
##	ZSCAN9	ZWILCH	WNK3	hsa-mir-98
##	3	17	21	3
##	hsa-mir-940	ESRP1	hsa-mir-937	hsa-mir-92b
##	11	8	23	18
##	DHX16	hsa-mir-877	PRR3	TRIM26
##	10	24	4	10
##	HCG18	C6orf136	CLDN12	MSANTD2
##	24	14	19	1
##	hsa-mir-769	FBXO46	OPA3	hsa-mir-744
##	9	19	9	3
##	hsa-mir-675	hsa-mir-625	PLEKHG3	hsa-mir-615
##	6	8	9	6
##	hsa-mir-451	CPNE3	hsa-mir-425	hsa-mir-423
##	4	18	8	22
##	TNFAIP1	hsa-mir-409	MICALCL	ENSG00000099972
##	18	11	4	2

##	hsa-mir-382	SDF2	hsa-mir-375	hsa-mir-34a
##	4	9	18	4
##	DYNC1LI2	hsa-mir-328	hsa-mir-29b-2	NME1-NME2
##	7	5	16	22
##	hsa-mir-26b	hsa-mir-26a-2	ZNF830	hsa-mir-223
##	12	4	18	8
##	hsa-mir-22	hsa-mir-205	SERTAD4	LRRC23

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##          12          15          23          9
##      SPSB2  hsa-mir-200c      ACRBP      RPL13P5
##          3           10          19          2
##  hsa-mir-199b      DHDDS      DOLK  hsa-mir-1976
##          16          13          10          4
##      C1orf172      PAFAH2      ZDHHC18  hsa-mir-194-2
##          11           4          25          19
##      HSPA14  hsa-mir-192      RFX1      HIVEP2
##          2           15          22          1
##      CD97  hsa-mir-181c      NANOS3  hsa-mir-181a-1
##          8            22          22          15
##      RASIP1  hsa-mir-150      hsa-mir-149  hsa-mir-139
##          5            5          21          24
##      DALRD3      ZNF74      CLTCL1      PAX7
##          3            4           1          16
##      DGCR2      KLHL22  hsa-mir-1306      ZDHHC8
##          4            18           4          15
##      PI4KA  hsa-mir-1301      hsa-mir-1292  hsa-mir-1254
##          23           20           20          10
##  hsa-mir-1248  hsa-mir-1228  hsa-mir-1180      PILRB
##          14           23           23           5
##  hsa-mir-106b  hsa-let-7f-2      SEPP1      CMAS
##          19           17           1          22
##      CCDC152
##          17

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#Get detected communities
communities(sg)

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## $`1`
## [1]   53   114   118   127   134   156   170   199   209   283   340
## [12]  341   342   344   345   346   352   354   384   389   396   429
## [23]  431   443   448   449   475   481   547   555   564   565   566
## [34]  637   639   656   672   697   708   709   710   713   714   720
## [45]  744   771   795   803   804   820   844   855   860   862   868
## [56]  875   923   965   996  1017  1041  1048  1059  1152  1207  1212
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## [78] 1392  1414  1431  1476  1501  1559  1578  1611  1613  1616  1631
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## [100] 2043  2079  2080  2081  2100  2112  2132  2138  2150  2175  2205
## [111] 2216  2220  2273  2422  2480  2495  2499  2671  2676  2765  2769
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## [133] 3352  3364  3403  3414  3416  3429  3460  3476  3484  3488  3489
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## [188] 4032 4161 4225 4227 4228 4229 4230 4232 4233 4234 4297
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## [254] 5205 5206 5207 5216 5273 5278 5305 5306 5344 5533 5537
## [265] 5580 5588 5590 5604 5606 5608 5609 5642 5655 5658 5699

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## [551] 12420 12468 12479 12495
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## [199] 5218 5235 5414 5501 5680 5685 5710 5718 5753 5785 5819
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## [254] 8259 8273 8507 8520 8669 8814 8868 8890 8947 9196 9199
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## ... 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000

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## [287] 10866 10868 10890 10907 10912 11027 11121 11129 11139 11214 11220
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## [100] 6016 6063 6208 6221 6253 6289 6325 6402 6534 6547 6565

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## [111] 1623 1650 1675 1718 1757 1768 1771 1774 1785 1919 1930
## [122] 1933 1935 2007 2041 2054 2068 2070 2090 2119 2168 2181
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## [386] 5130 5136 5141 5142 5175 5178 5180 5181 5183 5184 5185
## [397] 5186 5187 5188 5189 5190 5191 5193 5198 5219 5226 5237
## [408] 5238 5239 5240 5249 5251 5290 5300 5308 5314 5317 5319
## [419] 5324 5326 5327 5336 5337 5343 5348 5351 5354 5356 5359
## [430] 5361 5362 5369 5372 5374 5400 5403 5430 5431 5433 5435
## [441] 5443 5444 5445 5464 5486 5498 5558 5584 5602 5603 5615
## [452] 5630 5637 5638 5639 5641 5646 5662 5668 5692 5720 5722
## [463] 5747 5768 5789 5814 5834 5876 5879 5894 5897 5918 5919
## [474] 5934 5937 5949 5969 5970 5972 5973 6008 6009 6013 6082

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## [485] 6089 6098 6121 6125 6180 6181 6190 6199 6204 6215 6217
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## [507] 6298 6299 6300 6301 6303 6306 6307 6309 6310 6311 6312
## [518] 6354 6365 6389 6390 6393 6405 6423 6431 6435 6437 6440
## [529] 6460 6461 6486 6511 6512 6530 6553 6555 6593 6596 6597
## [540] 6602 6603 6604 6610 6634 6636 6660 6662 6679 6687 6690
## [551] 6694 6696 6698 6706 6707 6713 6721 6726 6736 6738 6742
## [562] 6743 6744 6751 6754 6755 6757 6759 6761 6764 6787 6798
## [573] 6800 6813 6819 6821 6829 6831 6844 6879 6893 6896 6899
## [584] 6952 6964 6965 6970 6971 6976 6978 6980 6982 6996 6997
## [595] 7001 7006 7008 7010 7012 7013 7014 7042 7050 7051 7067
## [606] 7069 7080 7093 7103 7110 7111 7115 7116 7132 7134 7136
## [617] 7176 7177 7203 7204 7205 7206 7208 7210 7219 7224 7229
## [628] 7230 7231 7241 7243 7256 7260 7262 7265 7281 7284 7293
## [639] 7306 7309 7320 7347 7350 7357 7362 7367 7381 7385 7402
## [650] 7404 7422 7425 7434 7438 7439 7462 7463 7464 7465 7471
## [661] 7477 7494 7499 7502 7515 7535 7544 7546 7562 7565 7568
## [672] 7595 7596 7597 7599 7620 7626 7630 7632 7646 7647 7660
## [683] 7661 7663 7666 7667 7668 7669 7672 7676 7678 7681 7682
## [694] 7683 7701 7702 7704 7705 7784 7817 7858 7864 7936 7984
## [705] 8002 8004 8027 8048 8051 8052 8054 8070 8074 8081 8083
## [716] 8085 8111 8115 8161 8182 8211 8264 8271 8289 8292 8293
## [727] 8294 8320 8327 8328 8329 8330 8331 8357 8364 8370 8393
## [738] 8395 8400 8406 8416 8426 8427 8434 8488 8490 8492 8509
## [749] 8527 8528 8532 8543 8550 8555 8560 8563 8572 8573 8578
## [760] 8604 8613 8631 8642 8685 8693 8711 8712 8744 8757 8772
## [771] 8781 8794 8807 8815 8822 8829 8844 8848 8866 8867 8874
## [782] 8884 8891 8894 8908 8909 8937 8944 8951 8953 8959 8990
## [793] 8991 9000 9009 9023 9024 9025 9027 9029 9032 9033 9034
## [804] 9036 9078 9106 9129 9134 9140 9141 9147 9149 9157 9159
## [815] 9160 9170 9187 9202 9206 9229 9267 9272 9285 9290 9299
## [826] 9300 9303 9335 9336 9339 9379 9384 9389 9394 9406 9407
## [837] 9408 9410 9415 9421 9422 9423 9428 9429 9444 9453 9456
## [848] 9465 9467 9525 9550 9621 9642 9678 9694 9698 9702 9705

```

```

## [859] 9718 9728 9732 9733 9738 9765 9792 9794 9795 9797 9799
## [870] 9800 9802 9809 9811 9814 9887 9914 9918 9932 9968 9969
## [881] 9971 9974 9984 10007 10063 10078 10091 10092 10093 10098 10099
## [892] 10102 10103 10104 10106 10110 10142 10161 10178 10190 10212 10227
## [903] 10245 10247 10248 10249 10251 10264 10271 10278 10321 10336 10344
## [914] 10353 10369 10380 10384 10386 10388 10389 10390 10400 10408 10414
## [925] 10468 10499 10501 10528 10529 10530 10553 10554 10584 10596 10628
## [936] 10686 10708 10710 10718 10722 10724 10725 10726 10736 10740 10746
## [947] 10749 10751 10768 10775 10778 10781 10782 10829 10837 10863 10891
## [958] 10906 10911 10925 10952 10991 10996 10997 11058 11070 11073 11079
## [969] 11080 11093 11102 11110 11122 11138 11144 11146 11187 11213 11222
## [980] 11239 11274 11279 11288 11300 11317 11318 11341 11367 11373 11382
## [991] 11388 11408 11433 11435 11441 11475 11481 11508 11509 11516 11522
## [1002] 11532 11544 11552 11556 11559 11573 11576 11585 11587 11589 11590
## [1013] 11591 11595 11600 11611 11622 11646 11664 11670 11673 11677 11678
## [1024] 11722 11729 11735 11739 11747 11754 11773 11780 11782 11793 11803
## [1035] 11807 11814 11816 11819 11820 11850 11852 11867 11876 11893 11897
## [1046] 11942 11951 11954 11959 12003 12009 12029 12032 12042 12051 12091
## [1057] 12097 12104 12106 12119 12137 12140 12155 12185 12190 12206 12220
## [1068] 12231 12237 12243 12254 12256 12278 12281 12291 12293 12295 12298
## [1079] 12306 12330 12337 12351 12369 12388 12432 12444 12467 12470 12471

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## [1090] 12496
##
## $`23` 
## [1] 22 105 266 363 569 647 858 873 887 888 952
## [12] 1158 1344 1459 1541 1597 1733 1767 1798 1822 1853 2030
## [23] 2078 2235 2271 2272 2274 2276 2278 2279 2280 2350 2446
## [34] 2498 2580 2677 2733 2735 2898 3130 3154 3155 3156 3159
## [45] 3160 3162 3163 3166 3167 3169 3170 3171 3172 3173 3174
## [56] 3309 3351 3355 3356 3357 3361 3362 3365 3366 3369 3370
## [67] 3373 3438 3512 3559 3652 3653 3656 3659 3660 3662 3663
## [78] 3760 3771 3810 3947 3971 4002 4030 4031 4042 4053 4111
## [89] 4132 4136 4210 4282 4301 4388 4461 4780 4881 5003 5004
## [100] 5005 5008 5009 5054 5110 5116 5153 5325 5342 5426 5517
## [111] 5526 5582 5729 5791 5799 5812 5820 5862 5941 5951 5959
## [122] 5965 5982 5992 6010 6012 6017 6024 6218 6290 6316 6470
## [133] 6587 6665 6676 6741 6890 6948 6949 6962 7021 7047 7048
## [144] 7061 7062 7063 7064 7065 7098 7217 7248 7291 7334 7338
## [155] 7341 7377 7492 7522 7578 7639 7677 7718 7721 7783 7787
## [166] 7790 7818 7999 8186 8214 8301 8306 8316 8344 8347 8428
## [177] 8429 8430 8526 8548 8559 8636 8667 8694 8721 8752 8754
## [188] 8768 8782 8823 8896 8905 8927 9060 9067 9071 9103 9212
## [199] 9438 9454 9485 9491 9558 9571 9572 9619 9631 9649 9658
## [210] 9710 9749 9752 9772 9786 9788 9808 9831 9837 9842 9868
## [221] 9873 9888 9937 9967 10003 10014 10015 10018 10080 10176 10205
## [232] 10207 10217 10237 10283 10289 10306 10311 10316 10335 10340 10361
## [243] 10367 10407 10458 10465 10466 10470 10538 10549 10598 10603 10668
## [254] 10732 10769 10785 10787 10803 10805 10841 10860 10871 10872 10888
## [265] 10944 10962 11008 11013 11083 11167 11206 11211 11223 11224 11231
## [276] 11233 11346 11403 11404 11413 11489 11519 11536 11538 11539 11548
## [287] 11700 11714 11727 11751 11904 11957 11966 12053 12083 12092 12099
## [298] 12117 12133 12154 12217 12218 12314 12329 12341 12352 12356 12376
## [309] 12389 12411 12451 12485 12490 12491
##
```

```

## $`24` 
## [1] 2 7 8 183 383 469 562 568 636 727 728
## [12] 729 772 777 778 934 988 1037 1210 1503 1582 1591
## [23] 1601 1610 1612 1647 1656 1702 1765 1766 1896 1950 2077
## [34] 2095 2098 2128 2167 2194 2353 2393 2459 2504 2559 2560
## [45] 2569 2574 2575 2583 2683 2694 2695 2702 2704 2863 2890
## [56] 3089 3093 3120 3134 3205 3206 3209 3225 3239 3269 3270
## [67] 3302 3303 3307 3310 3311 3313 3314 3315 3318 3319 3320
## [78] 3322 3323 3324 3329 3375 3384 3390 3427 3449 3516 3518
## [89] 3563 3566 3570 3578 3593 3614 3615 3620 3698 3753 3768
## [100] 3779 3804 3805 3806 3807 3814 3821 3823 3845 3884 3890
## [111] 3901 3914 3992 4007 4180 4226 4307 4314 4428 4429 4433
## [122] 4435 4443 4446 4457 4458 4459 4460 4471 4478 4558 4695
## [133] 4698 4782 4962 4970 4972 4977 4979 5016 5027 5037 5049
## [144] 5099 5101 5102 5143 5144 5171 5227 5274 5302 5309 5330
## [155] 5358 5428 5447 5509 5545 5618 5635 5650 5677 5711 5713
## [166] 5765 5826 5881 5910 5976 5979 6054 6067 6068 6069 6155
## [177] 6256 6386 6396 6415 6419 6439 6441 6480 6484 6516
## [188] 6522 6539 6546 6557 6562 6599 6635 6649 6675 6711 6719
## [199] 6740 6795 6833 6835 6836 6838 6888 6985 6989 7027 7040
## [210] 7101 7126 7152 7165 7186 7189 7192 7261 7314 7324 7326
##
```

```

## l221] 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540
## [232] 7433 7440 7441 7448 7478 7483 7528 7530 7564 7567 7572
## [243] 7577 7587 7588 7606 7611 7612 7622 7624 7625 7627 7652
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## [265] 7861 7862 7872 7952 7953 8011 8030 8036 8069 8075 8076
## [276] 8109 8176 8191 8205 8209 8218 8250 8253 8274 8286 8318
## [287] 8321 8322 8323 8326 8336 8359 8374 8376 8442 8503 8510
## [298] 8523 8533 8540 8583 8606 8615 8621 8644 8650 8666 8668
## [309] 8673 8710 8713 8718 8758 8780 8801 8849 8931 8940 8948
## [320] 8949 8954 8982 8985 9020 9061 9063 9080 9085 9200 9228
## [331] 9255 9257 9258 9301 9326 9329 9331 9340 9373 9380 9383
## [342] 9400 9448 9459 9547 9688 9689 9690 9696 9707 9717 9720
## [353] 9721 9725 9741 9790 9890 9935 9982 10060 10067 10069 10113
## [364] 10135 10254 10366 10374 10500 10541 10578 10592 10679 10696 10717
## [375] 10731 10741 10757 10772 10813 10814 10820 10918 10950 10951 10961
## [386] 10969 11034 11039 11099 11117 11125 11128 11134 11135 11143 11158
## [397] 11175 11176 11177 11178 11198 11202 11308 11339 11358 11384 11393
## [408] 11405 11409 11480 11483 11521 11526 11542 11553 11599 11601 11610
## [419] 11628 11634 11641 11683 11757 11771 11785 11798 11831 11879 11896
## [430] 11963 11977 11997 11999 12018 12030 12128 12175 12179 12182 12198
## [441] 12199 12200 12202 12203 12204 12210 12250 12262 12271 12279 12335
## [452] 12342 12348 12349 12361 12402 12414 12417 12476
##
## $`25`
## [1] 3 38 54 66 149 157 173 237 274 275 276
## [12] 284 285 286 287 288 289 290 291 292 293 294
## [23] 295 296 298 299 300 302 303 310 311 312 313
## [34] 314 315 316 317 318 319 320 323 324 325 326
## [45] 327 328 366 368 400 401 444 458 465 486 490
## [56] 554 567 662 668 689 692 698 699 700 701 702
## [67] 749 750 753 754 761 763 779 800 811 832 861
## [78] 955 961 968 1035 1084 1108 1138 1139 1195 1209 1213
## [89] 1217 1218 1220 1222 1223 1230 1231 1232 1239 1248 1253

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## [100] 1255 1269 1276 1295 1296 1298 1299 1318 1319 1320 1321
## [111] 1322 1323 1333 1339 1351 1355 1356 1360 1367 1387 1393
## [122] 1396 1402 1405 1406 1418 1419 1424 1440 1447 1454 1504
## [133] 1514 1517 1520 1533 1545 1553 1556 1557 1562 1569 1635
## [144] 1640 1664 1688 1705 1779 1782 1814 1864 1876 1918 1931
## [155] 2000 2001 2004 2005 2020 2021 2032 2045 2048 2051 2057
## [166] 2058 2059 2060 2118 2122 2131 2141 2154 2155 2156 2160
## [177] 2176 2214 2218 2232 2257 2258 2259 2267 2268 2275 2283
## [188] 2287 2293 2294 2327 2328 2329 2330 2336 2383 2384 2385
## [199] 2406 2409 2410 2425 2427 2490 2782 2797 2815 2821 2822
## [210] 2827 2832 2838 2842 2843 2846 2848 2855 2856 2858 2861
## [221] 2864 2865 2866 2867 2932 2936 2940 2941 2942 3232 3254
## [232] 3279 3281 3330 3333 3334 3336 3348 3389 3504 3548 3637
## [243] 3638 3651 3676 3677 3678 3679 3685 3686 3688 3692 3693
## [254] 3694 3695 3696 3697 3699 3701 3735 3746 3756 3757 3834
## [265] 3867 3956 3961 3970 3973 3974 3977 3978 3979 3980 3983
## [276] 4000 4029 4033 4041 4060 4065 4133 4138 4204 4269 4319
## [287] 4343 4345 4348 4351 4352 4353 4355 4356 4357 4358 4359
## [298] 4362 4363 4364 4365 4366 4367 4369 4370 4373 4374 4376
## [309] 4380 4381 4384 4385 4389 4391 4393 4394 4397 4400 4401
## [320] 4402 4405 4407 4409 4414 4416 4417 4418 4419 4420 4481
## [331] 4482 4483 4484 4485 4487 4498 4511 4512 4513 4529 4538

```

```

## [342] 4539 4543 4561 4562 4568 4588 4591 4601 4603 4609 4702
## [353] 4704 4708 4721 4731 4735 4736 4739 4742 4743 4752 4753
## [364] 4758 4761 4768 4769 4794 4858 4865 4866 4942 4945 4946
## [375] 4983 5010 5011 5073 5074 5075 5128 5254 5258 5261 5385
## [386] 5399 5432 5436 5437 5438 5456 5457 5458 5460 5467 5481
## [397] 5510 5563 5569 5570 5623 5643 5810 5899 5903 5954 5989
## [408] 6039 6107 6157 6228 6257 6338 6349 6358 6359 6360 6362
## [419] 6364 6366 6367 6368 6369 6372 6373 6384 6388 6412 6582
## [430] 6601 6651 6678 6691 6700 6733 7020 7060 7187 7254 7255
## [441] 7257 7315 7354 7360 7368 7370 7393 7490 7520 7526 7558
## [452] 7592 7680 7739 7875 8014 8023 8028 8171 8302 8305 8337
## [463] 8342 8373 8392 8646 8726 8743 8769 8846 8850 8851 8853
## [474] 8854 8855 8856 8857 8859 8888 8910 8938 8958 9018 9119
## [485] 9123 9354 9355 9372 9376 9381 9451 9469 9495 9522 9587
## [496] 9592 9625 9634 9667 9742 9773 9789 9825 9893 9960 9985
## [507] 10016 10017 10019 10020 10021 10029 10032 10034 10036 10041 10075
## [518] 10095 10118 10151 10154 10155 10172 10337 10342 10343 10365 10494
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## [540] 10980 11183 11207 11212 11226 11229 11249 11320 11386 11463 11487
## [551] 11495 11546 11620 11633 11658 11889 11906 11923 11934 11946 11956
## [562] 12022 12067 12078 12084 12100 12118 12124 12130 12153 12174 12180
## [573] 12191 12196 12227 12387 12399 12463

```

Optional: Only use communities that are not made of isolates. We should not have any if we are using spin glass.

```

x <- which(sizes(sg) > 1)

#Create a subgraph of those communities
sub <- induced.subgraph(y, which(membership(sg)==x))

## Warning in membership(sg) == x: longer object length is not a multiple of

```

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```
## shorter object length
```

```
#plot(sub)
```

Create a function that creates a table of the memberships with the names from our input.

```

edgelist <- tapply(seq_along(membership(sg)), membership(sg), function(xx) xx)
comList <- tapply(membership(sg), membership(sg), names)

length(comList)                                     ## number of communities

## [1] 25

comsize <- sapply(comList, length)

# vx <- induced.subgraph(neighborhood.size(y,order=8, nodes=snps))
# vx<- graph.neighborhood(vx, 8, snps)
# vx<-get.edgelist(vx)

bigComIndex <- which(comsize>7)

```

```

## pull out a community based on its index
coms3 <- edgelist[bigComIndex[[25]]]

comGraphBig1 <- induced.subgraph(y, coms3[[1]])

#Create an edgelist that can be used in other analyses
c <- get.edgelist(comGraphBig1)

write.csv(c, "gamma-2-start1-stop-.8-comm-25.csv")

```

References

- J. Reichardt and S. Bornholdt: Statistical Mechanics of Community Detection, Phys. Rev. E, 74, 016110 (2006), <http://arxiv.org/abs/cond-mat/0603718>
- M. E. J. Newman and M. Girvan: Finding and evaluating community structure in networks, Phys. Rev. E 69, 026113 (2004)
- V.A. Traag and Jeroen Bruggeman: Community detection in networks with positive and negative links, <http://arxiv.org/abs/0811.2329> (2008).