

Supplemental Information

Artemisinin Target GABA_A Receptor Signaling and Impair α Cell Identity

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Table S1. Gene Sets used for GSEA. Related to Fig. 6.

V\$alpha	V\$beta	V\$endo			V\$exo		
AC018865.8	ABI2	A1CF	FXYD5	PTPRN	AADAC	FSTL3	PREP
AC140481.1	AC009041.1	ABCA5	FXYD6	QPCT	ABRACL	FTLP3	PROM1
ADORA2A	ADCYAP1	ABCC8	G6PC2	RARS2	AC239811.1	GADD45A	PRPS2
ARRDC4	AL117190.2	ABHD10	GAD2	RASSF6	ACSS2	GADD45B	PRSS1
ARX	ALCAM	AC027612.6	GAS2	RBM7	ACTR1B	GAS6	PRSS3
ASPH	ALOX5	AC140481.1	GC	RBP4	ADH1C	GATM	PRSS3P2
ASXL3	AP3B1	ACSL1	GCG	RFX6	ADPRHL2	GDE1	PRSS8
ATG7	APCDD1L	AHI1	GCH1	RGS4	AIMP2	GMNN	PSAT1
ATL2	APLP2	AKAP12	GNA11	RGS9	AKAP7	GNL3	PWP1
BAZ2B	ATP2A3	AL117190.2	GNAS	RIPPLY2	AKR1C1	GP2	PYCR1
BSDL2	BMP5	ALCAM	GNG4	RLIM	AKR1C2	GPRC5B	RAB20
C11orf24	C1orf127	AMACR	GPX3	RMI1	AKR1C3	GSTA1	RAB32
C18orf42	C21orf119	ANK1	GPX7	RNF130	AKR7A3	GSTA2	RALB
C19orf77	CADM1	ANKH	GUCY1B3	RP11-645C24.2	ALB	GSTM1	RAMP1
C21orf58	CAPN13	ANKRD12	GYG1	RP9	ALDH1B1	GSTM4	RARRES2
C4orf29	CASR	ANKRD36B	HACL1	RPP38	ALDOB	GYPC	RCAN1
CAMK2G	CD72	APBB1	HEPACAM2	RSPRY1	AMY2A	HAT1	RCN2
CD36	CDH18	APOBEC2	HMGNA4	RWDD4	ANPEP	HDCC3	REG1B
CDS2	CDK5R1	APTX	HOOK2	S100B	ANXA3	HES1	REG3A
CERCAM	CGRRF1	AQP3	HSCB	SCG2	ANXA9	HNMT	REG3G
CLU	CNTN4	ARG2	IAPP	SCG3	APOBEC3B	HSD17B2	RHOV
CTA-246H3.8	CSDE1	ARL6IP6	IDS	SCG5	APOBEC3C	HSPB8	RIPK2
DPP4	CTSV	ARMC2	INA	SCGB2A1	AQP1	IER3	RNASE1
EGFEM1P	CYP2U1	ASNSD1	INS	SCGN	ATL3	IFIH1	RNF19A
EGFL7	CYYR1	ATF7IP	ISCA1	SEC24D	AZGP1	IFITM2	RP11-467L13.5
ELL2	DLK1	ATG12	ISL1	SERGEF	B3GNT2	IFITM3	RP5-1108M17.5
EPG5	EDARADD	B9D1	ITFG2	SERTM1	BCL10	IFNAR1	RP6-149D17.1
EPHX2	EFCAB14	BAALC	KATNBL1	SESTD1	BDH2	IFT52	RSU1
ETFDH	ELMO1	BCHE	KCNK16	SH3GL2	BICC1	IL32	S100A14
F10	ELOVL4	BCKDHB	KIAA1109	SLC25A43	BMP2	IL8	SCO1
FADS2	ENPP4	BEX1	KIAA1324	SLC30A5	C10orf54	INSIG2	SDC4
FAM110B	ENTPD3	BEX2	KIF3A	SLC30A8	C1orf116	IQCK	SERINC2
FAM178A	ERO1LB	BEX5	KIF9	SLC35G2	C1R	KCNJ15	SERPINA3
FAM46A	FAM222A	BNIP2	KPNA5	SLC36A4	C3	KCTD14	SERPINA4
FAM84A	FAM76A	BRAP	KRT40	SLC7A8	C8orf4	KLK1	SERPINA5
FAP	FFAR1	BTG3	LARP1B	SLITRK6	CA12	KRT7	SERPINA6
FGF12	G6PC2	C1orf122	LDOC1	SMAD5	CA2	KRT8P48	SERPINB8
FSTL5	GCC1	C21orf119	LEPR	SMEK2	CASP7	KRTCAP3	SERPING1
FXYD5	GNAS	C22orf42	LOXL4	SMIM6	CAV2	LAD1	SGK1
GADD45G	GPM6A	C3orf14	LRFN5	SNAP25	CCL2	LAMC2	SH2D4A
GC	GPSM1	C6orf141	LYRM5	SNRPPF1	CCND1	LBH	SLC38A2
GCG	GREM1	CADM1	MAFB	SNX13	CDC42EP1	LCN2	SLC38A5
GLS	GUSB	CALB1	MAP1B	SPATA6	CELA2A	LGALS2	SLC3A1
GPR119	GYG1	CAND1	MAP2K1	SST	CELA3A	LGALS3	SLC40A1
GRIA3	HSPD1	CARTPT	MAP2K6	SSTR2	CELA3B	LGALS4	SLC43A1
HGD1A	IAPP	CBFB	MAP6	STAU2	CFB	LITAF	SLC44A2
HMGB2	IGF2	CBX1	MAPRE2	STMN2	CFI	LRRC40	SLC44A4
HMGB3	INS	CD200	MBOAT4	STXBP5L	CFTR	LYZ	SMAD2
HNRNPA3	KLHDC8A	CDCP1	MDK	SYT4	CHMP6	MAD2L1BP	SMPD2
HPS1	LGMN	CDKAL1	MED29	SYT5	CLDN1	MALL	SNRNP40
HSD17B14	LRR1M3	CFP1	METTL18	TCEAL2	CLMN	MAT2B	SPIN1
HTR1F	MAFA	CHD9	MOB1B	TCEAL3	CLPS	MFSD5	SPP1
IRX2	MRAP2	CHGA	MS4A8	TCTA	CNN3	MGST1	SQRDL
ITPK1	MTSS1	CHGB	MSANTD4	TM4SF4	CORO1C	MIPEP	STAP2
KCNMA1	MXRA7	CKMT1A	MXRA7	TMEM128	CPA1	MKI67IP	STK38
KL	NECAB1	CKMT1B	MYCBP	TMEM168	CPA2	MMP7	STXBP3
KLHL41	NKX6-1	CLDND1	MYO3A	TMEM176A	CREB5	MRPL15	STXBP6
KPNA6	NMRK1	CMSS1	NCK1	TMEM176B	CTGF	MRPL44	SYCN
LOXL4	NPTX2	COA5	NEMF	TMEM39A	CTNNA1	MRPS12	TACSTD2
MBOAT2	NTPCR	COG1	NEUROD1	TMEM42	CTRB2	MRPS22	TC2N
MCOLN3	OXL1D1	COPRS	NLRP1	TMEM45B	CTRC	MSN	TCEA3
MLLT11	PCSK1	CPE	NMRK1	TMEM53	CTRL	MT2A	TES
MRC1	PFKFB2	CPSF3	NNMT	TMEM59L	CTSH	MUC20	TESC
MRC1L1	PIGV	CPVL	NPTX2	TMEM70	CTSS	MYC	TFPI2
MYBPHL	PIK3IP1	CRYBA2	NSL1	TMOD1	CUZD1	NARS2	TGIF1
NAA20	RAPH1	CTR9	NT5C3A	TOR1AIP2	CXCL1	NCEH1	TINAGL1
NHP2L1	RASA4	CXorf57	NT5DC1	TPR	CXCL16	NDUFAF4	TM4SF18
OGT	RASA4B	DCAKD	OAT	TRAV8-5	CXCL17	NECAP2	TMEM184C
PALLD	RASGRF1	DDX3Y	PAK3	TRMT11	CXCL2	NEURL3	TMEM27
PDE4DIP	RBP4	DENND5B	PAM	TSPAN1	CXCL6	NINJ1	TMEM43
PDZK1	RGS16	DFFA	PAN2	TSPAN2	CYR61	NIT2	TMEM87B
PLA2G16	RNF130	DHRS2	PAPOLG	TSPAN7	DAB2	NOB1	TMEM97
PLCE1	ROBO2	DHX29	PAPPA2	TTC32	DCDC2	NQO1	TMSB4XP6

V\$alpha	V\$beta	V\$endo			V\$exo		
PLOD2	RRAGB	DIRAS3	PAX6	TTR	DCTPP1	NQO2	TMSB4XP8
PMM1	RRNAD1	DKFZP761J1410	PCM1	UBQLN1	DDIT4	NTRK2	TNFAIP2
PNISR	SALL2	DLK1	PCP4	UCHL1	DEFB1	NUAK2	TPST2
POPDC3	SCD5	DNAJC12	PCSK1	USP18	DHRS3	NUPR1	TRIB1
PRKCE	SEMA5A	DUSP26	PCSK1N	VAMP2	DHRS7B	OLFM4	TRIM5
PTPN2	SFTPA1	EFCAB7	PCSK2	VDAC1P8	DUOXA2	OSTF1	TRPV6
RAB3C	SGCB	EGR3	PDE4DIP	VLDLR	DUSP5	PACSIN2	TRUB2
RSAD2	SGK3	EGR4	PDLIM4	VWA5A	EDN1	PDCD2	TST
SETD2	SIAH1	ELMO1	PEMT	WI2-1896O14.1	EEPDI	PDGFD	TTC4
SGCZ	SLC25A34	EMC2	PFKFB2	YIPF6	EFEMP1	PDIA2	U66061.39
SLC38A4	SLC30A8	ENO1P1	PIGK	ZDHHC4	EFTUD2	PDLIM3	UGT2A3
SORT1	SLC43A2	ENO2	PIGP	ZFAND2A	EIF2B1	PDLIM7	UGT2B15
SPATC1L	SOCS2	ENPP2	PJA2	ZKSCAN1	ENC1	PDZK1IP1	UPK1B
SPOCK3	SORL1	ENPP5	PKIB	ZNF397	ERP27	PHGDH	VTCN1
SRBD1	SRD5A1	ENTPD3	PLAC8	ZNF44	ETS2	PHLDA2	XPNPEP1
SREK1	SUSD4	ESYT1	PNMAL1	ZNF502	F2RL1	PIGR	XRN2
STARD3	SYT13	FABP5	PNRC1	ZNF583	F3	PLA2G1B	ZC3H12A
TBC1D30	TBCC	FABP5P7	PIIH	ZNF765	FAM204A	PLLP	ZFP36L1
TMCO3	TDRP	FAM105A	PPP1R1A		FAM3B	PLS3	
TMEM236	TERF2IP	FAM13A	PPP2R3C		FAM47E	PLTP	
TTC39A	TMEM37	FAM159B	PPP6R3		FBXO25	PNLIP	
TTR	TSPAN1	FAM167A	PPY		FBXO34	PNLIPRP1	
UBQLN1	VATIL	FAM46A	PRAF2		FGL1	PNLIPRP2	
UQCC1	WNT4	FAP	PRCP		FLNA	PPAP2C	
VGf	WSCD2	FEV	PSTK		FLRT2	PPIC	
WDR37	ZNF441	FFAR1	PTGES3P2		FOSL1	PPIL4	
YIPF2	ZNF776	FRZB	PTPN2		FSTL1	PPP6C	

Table S2. Primer Sequences. Related to Methods and Resources.

Gene	Species	Forward primer	Reverse primer
ARX	Human	CTGCTGAAACGCAAACAGAG	TTCTGGAACCAGACCTGGAC
Gcg	Mouse	GAAGACAAACGCCACTCACA	CAGCATGCCTCTCAAATTCA
Mnx1	Mouse	AATGGAAACGCAAAG	CCATTGCTGTACGGGAAGTT

Table S3. Islet Donor Information, Related to Methods and Resources.

Donor	Gender	Age	BMI
Donor 1	M	47	27.5
Donor 2	M	37	22
Donor 3	F	62	29.8
Donor 4	M	39	22.2
Donor 5	F	56	26.56
Donor 6	M	17	21.5