Supplementary Table S1

A total of 423 genes from SEA	A total of 551 genes from STP
FUCA1	SIGMAR1
EPHX1	SLC6A3
HMBS	HRH3
GABRR2	DRD2
PLA2G4B	HRH1
PAM	ACHE
LPAR6	DRD3
CES2	SLC5A7
P2RY10	HRH2
GPR34	ADRA1B
LPAR4	OPRK1
CES1	ADRA2C
S1PR2	CHRM5
PLA2G2C	SLC6A2
LAP3	DNM1
LPAR2	PRCP
STS	CHRM4
FDPS	CHRM2
TLR2	CHRM3
FAAH	CHRNA4
LPAR3	CHRM1
CA3	HTR2A
SLC22A8	ADRA2B
NOD1	ADH1A
PIN4	HTR5A
TNF	SLC18A2
PPP1CC	KCNH2
PPM1B	ADH1C
PPID	TAAR1
PRNP	HTR1A
LPAR1	ADORA3
DNM1	PTGS2
ADH7	KCNN4
TLR8	DRD4
ADH1B	ADRA1A
GNAI1	PLA2G2A
GNAI3	PLA2G1B
CA6	BCHE
ADH1C	HTR1B
GNAO1	HTR1D
CA5B	FYN
ADH1A	EGFR
SLC22A1	CYP2D6
CA5A	PNMT
RELA	HTR6
CA4	PRMT6
CA14	CARM1
CA7	HTR2B
HAO1	DRD5
SPHK1	ADRA2A
SLC22A6	DRD1
PPARA	ADRA1D

GPR84
BBOX1
OXER1
CYP4F2
GABRQ
KDM7A
SLC25A20
COL4A3BP
ACER2
MPEG1
KDM5A
POLM
PLA2G5
GGPS1
PHF8
GSTK1
GPR174
PAOX
FABP3
BHMT
SLCO2A1
SELL
CDC25C
SLC6A11
SMPD2
LTB4R
ACP1
SELP
ENPP2
HMGCR
GSTM1
KDM2A
PLA2G4C
KDM4A
RARB
CDC25B
KDM4C
PTGER2
EPHX2
THRB
GSR
POLH
THRA
TBXAS1
S1PR3
ENPEP
CDC25A
POLL
POLK
S1PR4
NAAA
PLA2G10
POLB
PRKCA
PLA2G2A
CYP3A4
CHRNB2
SHBG
CA1
EPHX1
ELANE
CA9
KCNK2
GRM5
CTRB1
TNKS2
FKBP1A
IDO1
ADORA1
ADORA2A
PDE10A
SLC6A4
MAOA
CTSH
CTSL
CTSB
CA2
PLA2G6
TNKS
VCAM1
NISCH
NAAA
SLC22A2
SLC47A1
GRIN1
GRIN2A
CA7
CA3
CA6
CA12
CA14
CA4
CA5B
CA5A
CA13
HTR2C
HTR7
KDM1A
SCN4A
PIM1
PAOX
GRIN2B
CES1
CES2
PPARA
PPARD
FABP4
FABP5
FABP3
FABP2

HSD17B3
S1PR5
PPARG
TBXA2R
FOLH1
DAGLA
PTGER4
PTGIR
PLA2G4A
FFAR4
GSTA1
GABBR2
GABBR1
PTGER3
FABP4
PTGFR
GPR35
ATG4B
KDM4E
GABRR1
PPARD
S1PR1
TRPV1
CNR1
KDM5C
CPT2
ADH4
LDLR
CEL
KCNQ3
GLA
PTPN13
KCNQ2
BMP1
CCND3
KAT2B
ASAH1
PTPN7
SPTLC1
SPTLC2
PAFAH1B2
MGLL
ABCC2
CNR2
SOAT2
PRKCE
SPHK2
LPAR5
ALOX12
TOP1
FFAR1
KAT5
PDCD4
ALOX5
IARS
FFAR1
SLC22A6
CDC25A
AKR1B10
HSD11B1
UGT2B7
NR1H4
CYP19A1
SERPINA6
HSD17B3
G6PD
GABBR1
POLB
PTGER2
KDM2A
KDM5C
GABRA2
GPBAR1
VDR
AR
FNTA
PHF8
PTPN1
PLG
GSTK1
FAAH
PPARG
TERT
FABP1
HSD11B2
PTGFR
NPC1L1
RARG
RARB
RARA
GLRA1
CDC45
PTPRC
HAO1
RXRB
RXRG
RXRA
CYP26B1
CYP26A1
NR0B2
SCD
CACNA2D1
HMGCR
PTGER4
CHRNA7
SAE1
PDE4A
PDE4B
SLC16A1
GABRB2

VEGFA
POLA1
TOP2A
APEX1
TRTV1
KCNK9
LCK
KCNK3
HSPB1
SCN4A
DDX3X
NR1H4
HTR1F
HDAC6
KCNJ11
HDAC8
TAS1R2
FPR1
AOC2
SENP7
TAS1R3
AKR1C3
ACR
IL2
CREBBP
PRTN3
MAOB
KLF5
EIF4H
MAPK14
CTDSP1
PABPC1
AKR1C2
HDAC1
NOX1
KCNMA1
TCF7L2
APOBEC3A
HDAC2
CTNNB1
CYP1A2
RXFP1
P4HTM
BRPF1
NR2E3
BCAT1
SIRT2
FYN
AVPR2
STAT3
SENP6
AVPR1A
NAMPT
SORT1
MB
GABRG2
FNTB
UBA2
TOP2A
CNR1
GRIA2
FNTA FNTB
HRH4
QPCT
CPT1A
LRRK2
STS
HPGD
PIK3CG
PI4KB
PI4KA
PIK3CA
LDLR
RORC
KIF11
ALOX5
MAPK14
DHFR
F2R
PDE7A
LTA4H
FFAR4
ALOX15
ALOX12
ABCC1
ABCB1
EPHX2
PTGES
TBXA2R
PLA2G4A
RORB
MAPK1
RORA
HNF4A
PTPN2
PTGS1
PREP
PTPN6
CDC25B
PDE4D
LTB4R
TOP1
CD81
PRKCH
NR1H3
CYP51A1
PTPRF
PTPN11
NR3C1
TRPV1

ALOX15
ASF1A
NCEH1
NEU3
UCHL1
GRIK1
TGM1
DHODH
EPHB3
CA1
F13A1
F12
CA2
PTPRG
SCN3A
IDO1
CCR9
PYGL
CFTR
RUVBL1
TGM3
GHSR
GABRA2
GP6
CAMK2D
KIF20A
GUSB
TUBB3
ABCG2
PRKAB1
PRKCH
PRKAG1
NUAK1
MMP16
MTNR1B
PRKCB
MTNR1A
KEAP1
GABRB1
PDGFRB
CYP1B1
TNKS2
CLK1
TNKS
GABRB2
BMP4
CYP2C19
AHR
NFATC1
GABRG2
PRKCD
FLT4
GSK3B
STAT1
HDAC3
CYP17A1
ACP1
PTGIR
MAPK3
PTGER1
BACE1
NR1I3
CYP2C19
PGR
SRD5A2
NOS2
NR3C2
ESR2
SLC22A12
PTGDR2
ESR1
IL6
GLUL
EDNRA
MDM2
TRPM8
PSEN2
CMA1
CTSG
GRM2
ENPP2
OXER1
RBP4
IMPDH2
PTGDR
METAP1
MMP2
PTGES2
PRKAG1
ITGAL
PSENEN
NCSTN
APH1A
PSEN1
APH1B
ICAM1
ITGB2
PRKAB1
PRKAA2
SOAT1
SOAT2
GPR119
CNR2
SRD5A1
CTSD
NR1I2
CCR2
P2RX7
HSD3B1
C3AR1

GABRA3
G6PD
CYP3A4
SGK1
NCOR2
CYP2D6
CBR1
DYRK1A
PRKCQ
KIT
GABRA1
PHLPP2
NPBWR1
ECE1
PRKAA1
TEK
C1R
CDK5
MAOA
GABRB3
FLT3
BMPR1A
HTR2B
NR4A2
NTRK3
ERCC5
PIM3
ADORA3
NQO1
CYP2C9
MAP4K5
HTR1A
CAMK2B
TUBB1
IMPDH2
ALB
LDHB
RXRA
LDHA
RNASEH1
CXCL8
RARG
SLC7A11
TYR
DCTPP1
EPAS1
LTA4H
MDH1
HDAC10
TERT
ITGA3
NCOR1
PTPRF
PTPRC
ATP2A1
THRB
MTNR1A
HSP90AA1
MTNR1B
H1F0
KDR
MAPK10
ICMT
KCNA5
ACACB
PDE3A
PDE3B
CTSS
LSS
PFKFB3
MAPK11
HSPB1
BRD4
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CREBBP
GPR88
TRPA1
PTAFR
ROCK2
ROCK1
SQLE
MPEG1
HSD17B2
TAS2R31
EPAS1
FDFT1
PTGER3
HDAC6
KCNK9
KCNK3
MAOB
MLYCD
HDAC8
PRSS1
PLAU
ADAMTS5
ERBB2
HDAC2
CAPN1
HDAC1
MMP3
MMP1
FAP
CYP24A1
CYP27A1
C5AR1
HDAC3
RCOR1
CDC7

ELOVL6
HDAC11
SERPINE1
UGCG
ADORA2B
CACNA1G
PARP10
PFKFB2
NR0B1
HDAC9
NR5A1
HRH1
SMARCA2
PORCN
FNTB
HDAC5
FNTA
CA9
PANK1
SCN8A
HDAC4
PTPN2
HGFAC
ESR2
HRH2
FPR2
XBP1
ADORA2A
PFKFB3
HDAC7
SLC1A2
SOAT1
ESR1
DUSP3
PTPN12
ELAVL1
NPY5R
SLC22A2
CA12
ADRB2
SLC1A3
MMP9
PRSS1
MOGAT2
SLC47A1
NPC1L1
NR1H3
CYP17A1
RORA
VDR
SREBF2
ABCB11
CYP24A1
SLC10A1
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DHODH
CDK5R1
DYRK1A
SLC5A1
DBF4
PSMB5
GABRB3
GPR139
HCRTR2
DUT
CENPE
KLK1
PRKD1
HCRTR1
CFD
MPO
IKBKB
CCNB3
PDGFRA
CSK
GSK3A
PRKCA
CCR1
PRKCG
KCNJ11
PARP3
BAZ2B
BAZ2A
GPR55
PGGT1B
PDE9A
METAP2
CCNC
F2
CDK8
PDGFRB
CDK1
CCNB1
CCNB2
GABRA3
GABRA1
GABRA5
GABRA6
CDK5
TGM2
F13A1
HTT
NUDT1
PARP1
PARP2
EPHB4
KDM5A
KDM5B
TTR
JAK2

GPBAR1
SHBG
SRD5A2
ABCC4
CD4
GC
SERPINA6
CDC45
SRD5A1
AR
ST3GAL1
SLC10A2
CYP19A1
EBP
CYP27B1
FGF1
EPHA7
EPHA2
EPHA5
EPHA4
EPHA8
SHH
EPHB1
RORC
EPHA1
EPHA6
ATIC
NR1H2
GBA2
EPHB2
SLC22A3
RRM1
SLC22A11
SETD7
CACNA1C
HCAR3
NR1I3
GSTM2
GRM8
PGR
GSTP1
JAK1
MET
CCNE1
MIF
CHEK1
MALT1
MCL1
RGS4
GSR
CDK2
CYP11B1
CYP11B2
CYP1B1
CYP1A1
RELA
FLT1
MGLL
GRM1
AKR1C3
AHR
APP
PGK1
MMP13
FPR2
PDE1B
TUBB3
PDE11A
PDE1A
PDE8B
PDE1C
UTS2R
STAT3
JAK3
KCNN3
STK17B
NAMPT
NTRK1
ASAH1
RPS6KB1
NMT1
CACNA2D2
SELE
SCN9A
NUAK1
NPBWR1
CCND1
TUBB1
TLR9
CDK4
TNNT2
TNNI3
SGPL1
AVPR1A
AVPR1B
OXTR

ALPL
AVPR2
CCR9
PLA2G2D
FOLH1
MPI
CHRNA3
NOS1
NOS3
KCNMA1
PDE7B
GCK
GRM4
TYMP
TYK2
ABCG2
S1PR1
NPY5R
S1PR3
TRIM24
LIPE
PRKCB
BRAF
SMO
ITK
PKM
MTTP
APOB
LCK
PTK6
BCL2L1
BCL2
BTK
PORCN
HPSE
GCKR
PPIA
GBA
SYK
PRKCQ
SIRT2
MAP3K12
PDPK1
IDH1
SLC9A1
PRKCE
KIF20A
CCNE2
RPS6KA3
SRC
CD38
AURKA
MTOR
PRKDC
ATM

ATR
CSF1R
FGFR3
NPY1R
MAP3K8
INSR
CCNA1
CCNA2
SREBF2
TSPO
SLC47A2
OPRM1
SLC6A15
ACLY
OPRL1
BDKRB2
PRKCD
PLK4
PTH1R
MAPK8
KCNJ5
KCNJ6
PDK2
KCNJ3
AKR1B1
CTRC
PTK2
PDE5A
TYMS
CLK4
IRAK4
PRKACA
PHOSPHO1
PABPC1
SETD7
CASP4
CASP9
CASP3
PIK3CB
CASP6
CASP7
AURKB
PLA2G7
GSK3B
PIK3CD
PLK1
PRTN3
PPP1CA
GRK2
MAPK9
MMP9
BCAT1
FLT3
CDK9
DUSP3

CDK7
SLC5A2
PIM2
CCNT1