SIMONS SEARCHLIGHT

Driven by science. United by hope.

The Simons Searchlight Gene List

The Simons Searchlight gene list contains 154 gene changes (orange) and 23 copy number variants (purple) that are known to be associated with autism and other neurodevelopmental disorders.

Genetic Changes We Study

1q21.1
2p16.3 deletion
2q34 duplication
2q37 deletion
2q37.3 deletion
5q35
6q16 deletion
7q11.23 duplication
9q34 duplication
15q11.2 BP1-BP2 deletion
15q13.3 deletion
15q15 deletion
15q24 deletion
16p11.2*
16p12.2 deletion**
16p13.11 deletion
16p13.3 deletion
17q11.2 dup
17p13.3
17q12
17q21.3
Xp11.22 duplication
Xq28 duplication

ACTB
ACTL6B
ADNP
ADSL
AFF2
ALDH5A1
AHDC1
ANK2
ANK3
ANKRD11
ARHGEF9
ARID1B
ARX
ASH1L
ASXL3
ATRX
AUTS2
BAZ2B
BCKDK
BCL11A
BRSK2
CACNA1C
CAPRIN1
CASK
CASZ1
CHAMP1
CHD2
CHD3
CHD8
CIC
CLCN4
CNOT3
CREBBP
CSDE1
CSNK2A1
CSNK2B
CTBP1
CTCF
CTNNB1

CUL3
DDX3X
DEAF1
DHCR7
DLG4
DMPK
DNMT3A
DSCAM
DST
DYNC1H1
DYRK1A
EBF3
EHMT1
EIF3F
EP300
FOXP1
GIGYF1
GIGYF2
GNB1
GRIN1
GRIN2A
GRIN2B
GRIN2D
HIVEP2
HNRNPH2
HNRNPU
IQSEC2
IRF2BPL
KANSL1
KATNAL2
KCNB1
KDM3B
KDM5B
KDM6B
KMT2A
KMT2C
KMT2E
KMT5B
MBD5

MBOAT7
MED13
MED13L
MEF2C
MEIS2
MYT1L
NAA15
NBEA
NCKAP1
NEXMIF
NIPBL
NLGN2
NLGN3
NLGN4X
NR3C2
NR4A2
NRXN1
NRXN2
NRXN3
NSD1
PACS1
PBRM1
PHF21A
PHF3
PHIP
POMGNT1
PPP3CA
PPP2R1A
PPP2R5D
PSMD12
PTCHD1
RALGAPB
RELN
RERE
REST
RFX3
RIMS1
RORB
SCN1A

SCN1B
SCN2A
SCN8A
SETBP1
SETD2
SETD5
SHANK2
SIN3A
SLC6A1
SLC9A6
SMARCA4
SMARCC1
SMARCC2
SON
SOX5
SPAST
SRCAP
STXBP1
SYNCRIP
SYNGAP1
TANC2
TAOK1
TBR1
TCF20
TLK2
TRIO
TRIP12
TSHZ3
UPF3B
USP9X
VPS13B
WAC
WDFY3
YY1
ZBTB20
ZNF292
ZNF462

* *Includes deletions and duplications that include at a minimum the BP4 - BP5 region (proximal) or BP2 - BP3 (distal) region*

** *Formerly known as 16p12.1 deletion*