

# The Simons Searchlight Gene List

The Simons Searchlight gene list contains 159 gene changes (orange) and 19 copy number variants (purple) that are known to be associated with autism and other neurodevelopmental disorders. Any result returned by SPARK, another SFARI initiative, are eligible in Simons Searchlight.

## Genetic Changes We Study

1q21.1	ACTB	CREBBP	KDM5B	NSD1	SHOC2
2p16.3	ACTL6B	CSNK2A1	KDM6B	PACS1	SIN3A
3q29	ADNP	CTBP1	KIAA2022	PBRM1	SLC6A1
5q35	ADSL	CTNNB1	KRAS	PCDH19	SLC9A6
7q11.23	AFF2	CUL3	KMT2A	PHF21A	SMARCA4
8p23.1	AHDC1	DDX3X	KMT2C	PHIP	SMARCC1
15q11.2 BP1-	ALDH5A1	DHCR7	KMT2E	POGZ	SMARCC2
BP2 deletion	ANK2	DMPK	KMT5B*	POMGNT1	SON
15q11.2-q13.1	ANK3	DNMT3A	LZTR1	PPP1CB	SOS1
15q13.3	ANKRD11	DSCAM	MAGEL2	PPP2B	SOS2
15q15	ARHGEF9	DST	MAP2K1	PPP2R1A	SPAST
16p11.2**	ARID1B	DYRK1A	MAP2K2	PPP2R5D	SRCAP
16p12.1	ARX	EBF3	MBD5	PSMD12	STXBP1
16p13.3	ASH1L	EHMT1	MBOAT7	PTCHD1	SYNGAP1
17p11.2	ASXL3	EP300	MECP2	PTPN11	TBCK
17q11.2	ATRX	FMR1	MED13	PTEN	TBR1
17q12	AUTS2	FOXP1	MED13L	PURA	TCF20
17q21.3	BAZ2B	FOXP1	MEIS2	RAF1	TCF4
22q11.2	BCKDK	GIGYF1	MYT1L	RAI1	TLK2
22q13.3	BCL11A	GIGYF2	NAA15	RELN	TRIO
	BRAF	GRIN2A	NBEA	RERE	TRIP12
	BRSK2	GRIN2B	NCKAP1	REST	TSC1
	CACNA1C	HIVEP2	NF1	RIMS1	TSC2
	CASK	HNRNPH2	NIPBL	RIT1	TSHZ3
	CDKL5	HNRNPU	NLGN2	SCN1A	UBE3A
	CHAMP1	HRAS	NLGN3	SCN2A	UPF3B
	CHD2	IQSEC2	NLGN4X	SCN8A	VPS13B
	CHD3	KANSL1	NRAS	SETBP1	WAC
	CHD7	KAT6A	NR4A2	SETD2	WDFY3
	CHD8	KATNAL2	NRXN1	SETD5	ZBTB20
	CIC	KCNB1	NRXN2	SHANK2	ZNF462
	CNOT3	KCNQ2	NRXN3	SHANK3	

\* Formerly known as SUV420H1

\*\* Including DISTAL