

# The SPARK Gene List

The SPARK gene list contains 153 single genes (blue) and 19 copy number variants (CNV) (orange) that are known to be associated with autism. More information about each autism-linked gene or CNV, along with its associated symptoms, is available at [www.genenames.org](http://www.genenames.org).

Copy Number Variants	Single Genes				
1q21.1	ACTB	CREBBP	KIAA2022	PHF3	SMARCC2
2p16.3	ADNP	CTNNB1	KRAS	PHIP	SON
3q29	ADSL	CTCF	KMT2A	POGZ	SOS1
5q35	AFF2	CUL3	KMT2C	POMGNT1	SOS2
7q11.23	AHDC1	DDX3X	LZTR1	PPP1CB	SOX5
8p23.1	ALDH5A1	DHCR7	MAGEL2	PPP2R5D	SPAST
15q11.2 BP1-BP2 deletion	ANK2	DLG4	MAP2K1	PSMD12	SRCAP
15q11.2-q13.1	ANK3	DMPK	MAP2K2	PTCHD1	STXBP1
15q13.3	ANKRD11	DNMT3A	MBD5	PTPN11	KMT5B (SUV420H1)
15q15	ARHGEF9	DSCAM	MBOAT7	PTEN	SYNGAP1
16p11.2	ARID1B	DYRK1A	MECP2	RAF1	TAOK1
16p12.1	ARX	EBF3	MED13	RAI1	TANC2
16p13.3	ASH1L	EHMT1	MED13L	RELN	TBCK
17p11.2	ASXL3	EP300	MEIS2	RERE	TBR1
17q11.2	ATRX	FMR1	MYT1L	RFX3	TCF20
17q12	AUTS2	FOXP1	NAA15	RIMS1	TCF4
17q21.3	BAZ2B	FOXP2	NBEA	RIT1	TLK2
22q11.2	BCKDK	GIGYF1	NCKAP1	RORB	TRIO
22q13.3	BCL11A	GIGYF2	NF1	SCN1A	TRIP12
	BRAF	GRIN2B	NIPBL	SCN2A	TSC1
	BRSK2	HECTD4	NLGN2	SCN8A	TSC2
	CACNA1C	HIVEP2	NLGN3	SETBP1	TSHZ3
	CASK	HNRNPH2	NRAS	SETD2	UBE3A
	CDKL5	HNRNPU	NR4A2	SETD5	UPF3B
	CHAMP1	HRAS	NRXN1	SHANK2	VPS13B
	CHD2	IRF2BPL	NRXN2	SHANK3	WAC
	CHD3	IQSEC2	NRXN3	SHOC2	WDFY3
	CHD7	KANSL1	NSD1	SIN3A	ZBTB20
	CHD8	KCNB1	PACS1	SLC6A1	ZNF292
	CIC	KDM3B	PCDH19	SLC9A6 (NHE6)	ZNF462
	CNOT3	KDM6B	PHF21A		