

**Table S6.** Canonical pathways of the DEGs correlated with DETEs and DE-Alu in the prefrontal cortex of ASD predicted by IPA.

Ingenuity Canonical Pathways	DETEs	DE-Alu	
	<i>p</i> value	<i>p</i> value	Molecules
Synaptogenesis Signaling Pathway	$7.08 \times 10^{-5}$	$8.91 \times 10^{-5}$	<i>ARPC1B, CDH12, CDH18, CNTNAP2, GRIN2A, GRIN2B, STXBP1, SYT13, VAMP2</i>
Calcium Signaling	$7.76 \times 10^{-5}$	$3.55 \times 10^{-2}$	<i>CAMK1D, GRIN2A, GRIN2B, TRPC5</i>
Fcy Receptor-mediated Phagocytosis in Macrophages and Monocytes	$8.13 \times 10^{-5}$	$2.29 \times 10^{-3}$	<i>ARPC1B, DOCK1, GPLD1, HMOX1</i>
Neuroinflammation Signaling Pathway	$2.34 \times 10^{-4}$	$2.29 \times 10^{-3}$	<i>CFLAR, GRIN2A, GRIN2B, HMOX1, IL18, TGFB3, TYROBP</i>
Ephrin Receptor Signaling	$3.31 \times 10^{-3}$	$3.09 \times 10^{-2}$	<i>ARPC1B, GNG5, GRIN2A, GRIN2B</i>
Reelin Signaling in Neurons	$1.17 \times 10^{-2}$	$3.80 \times 10^{-2}$	<i>ARPC1B, GRIN2A, GRIN2B</i>
Glutamate Receptor Signaling	$1.66 \times 10^{-2}$	$6.76 \times 10^{-3}$	<i>GNG5, GRIN2A, GRIN2B</i>
Axonal Guidance Signaling	$1.66 \times 10^{-2}$	$1.63 \times 10^{-1}$	<i>ARPC1B, DOCK1, GNG5, SLIT2, UNC5D</i>
Choline Biosynthesis III	$1.82 \times 10^{-2}$	$3.02 \times 10^{-3}$	<i>GPLD1, HMOX1</i>
nNOS Signaling in Neurons	$3.16 \times 10^{-2}$	$3.02 \times 10^{-2}$	<i>GRIN2A, GRIN2B</i>
Cell Cycle: G2/M DNA Damage Checkpoint Regulation	$3.98 \times 10^{-2}$	$3.24 \times 10^{-3}$	<i>BRCA1, CHEK2, MDM4</i>