

Ontology	Biological role	p-value	Fold	Genes	Binding sites
GO Molecular Function	cation channel activity	2.6×10^{-15}	2.1	94	131
	gated channel activity	2.9×10^{-15}	2.0	105	147
	voltage-gated ion channel activity	1.5×10^{-11}	2.1	65	95
	voltage-gated cation channel activity	7.8×10^{-10}	2.2	56	77
	potassium channel activity	2.5×10^{-9}	2.2	49	73
GO Biological Process	neurotransmitter transport	3.6×10^{-14}	3.4	30	55
	secretion by cell	9.2×10^{-12}	2.2	55	93
	secretion	1.6×10^{-11}	2.0	69	110
	potassium ion transport	2.6×10^{-9}	2.1	53	79
	neurotransmitter secretion	1.1×10^{-8}	3.4	14	31
GO Cellular Component	synaptic vesicle	7.3×10^{-9}	2.6	28	49
	cation channel complex	7.9×10^{-9}	2.2	51	69
	synaptic vesicle membrane	1.3×10^{-8}	3.2	21	33
	clathrin coated vesicle membrane	9.7×10^{-8}	2.5	26	42
	clathrin-coated vesicle	1.8×10^{-7}	2.0	36	63
Mouse Phenotypes	abnormal synaptic transmission	8.8×10^{-31}	2.1	172	269
	abnormal CNS synaptic transmission	9.6×10^{-27}	2.1	149	234
	abnormal excitatory postsynaptic currents	1.4×10^{-15}	2.8	45	79
	abnormal touch/ nociception	4.6×10^{-13}	2.2	74	104
	abnormal miniature excitatory postsynaptic currents	3.5×10^{-12}	3.5	26	44
PANTHER Pathway	Ionotropic glutamate receptor pathway	8.4×10^{-7}	2.5	21	36
	Synaptic vesicle trafficking	4.4×10^{-6}	3.4	13	20
Pathway Commons	Interaction between L1 and Ankyrins	5.5×10^{-6}	8.7	6	8
	Synaptic Transmission	1.5×10^{-5}	2.2	24	35
	Transmission across Chemical Synapses	3.2×10^{-5}	2.2	22	33
BioCyc Pathway	-				
TreeFam	-				
HGNC Gene Families	KCN, KV	2.2×10^{-5}	2.4	21	29
	CACN	2.4×10^{-5}	3.9	8	14