

## Product datasheet for **KN205202**

### CAMK2A Human Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	CAMK2A
Locus ID:	815
Components:	<p><b>KN205202G1</b>, CAMK2A gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GCTGGTACTCTTCCGTGAAG</p> <p><b>KN205202G2</b>, CAMK2A gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTGCCTCAGGAAGTCCTGGA</p> <p><b>KN205202D</b>, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p> <p>Homologous arm and GFP-puro sequences: pUC vector backbone in gray; Left arm sequence in blue; GFP-puro in green; Right arm in violet</p> <pre>TGAAGTTGCC AGGGTAACTG CATCCTGTCA TTCGTTCTG GGGACCATCC GGAATGCGGC ACCCACTGGC TGTTACCATG GCAACTGCCT TTTTGCCCA CTTAATCCCA TCCCGTCTGC TACAAGGGCC CCACAGTTGG AGGTGGGGGA GGTGGGAAGA GAAAAGATCA CTTGTGGACA AAGTTTGCTC TATTCCACCT CCTCCAGGCC CTCCTTGGGT CCATCACCCC AGGGGTGCTG GGTCCATCCC ACCCCAGGC CCACACAGGC TTGAGTATT GTGTGCGGTA TGGTCAGGC GTCCGAGAGC AGGTTTCGCA GTGGAAGGCA GGCAGGTGT GGGAGGCAG TTACCGGGGC AACGGGAACA GGGCGTTTTG GAGGTGGTTG CCATGGGGAC CTGGATGCTG ACGAAGGCTC GCGAGGCTGT GAGCAGCCAC AGTGCCCTGC TCAGAAGCCC CGGGCTCGTC AGTCAAACCG GTTCTCTGTT TGCACTCGGC AGCACGGGCA GGCAAGTGGT CCCTAGTTTC GGGAGCAGAG CAGCAGCGCC TCAGTCTGTT TCCCCAGTC CCAAGCCTCA CCTGCCTGCC CAGCGCCAGG GCGGGGAGGT CAGGGTCTCT AGTGGGGTGT GTGTGCCTGC AGTGCTTGGG GAGCATTCT TGTACACAGA TGAAGGCAGG CTGCATGGGT TTGGGGGCAC CTGCTGTGT ACAGAGTGT CAGAGTCGGG CGTGGGTATG TTTGTGGGTG CACAGATGTG CCAAGCTAGC CAGGCCAGTG TGTATGTAGG GATGAAGGT TGACAGTGA TGCCAGTGA CACACATACA CACAAAATGC ACACAAGTAC ACACAACCTG GATACACACA GATTCTTAGA GACTTAGGT TAAAAAGGGA TTTTCCTAGT CAGCTGGGTC CAAAGCTGA ATTCTTCTC TAGTTTTGCT TGAGGTGGCC ATCCGCCCTC CACTTAGATA CCTCCAGTGA CAGAGAATTC ACCAGCTCCC GGTAGTTCTT CCTGACTTTA GACACCCACA GTGACTGTAC AGAGTGGCCA ACTTCTCCCT CCCTACCTCC CCTTTCTCAG CTCTGCCAG GAGTGAGGGC GTCAGTACAG TAGGGTTAA TATCTGAGCA TGACAGGCTT CCCGGGTGTT GGGAGGTGGG GAGAGGAAAT CAGGAAAGCT GTAGCGGGGA</pre> <p><b>GE100003</b>, scramble sequence in pCas-Guide vector</p>



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**Disclaimer:** These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:** [NM\\_015981](#), [NM\\_171825](#), [NM\\_001363989](#), [NM\\_001363990](#), [NM\\_001369025](#)

**UniProt ID:** [Q9UQM7](#)

**Synonyms:** CAMKA

**Summary:** The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Several transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Jun 2018]

### Product images:

