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Product datasheet for TL513385

Camk1 Mouse shRNA Plasmid (Locus ID 52163)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Camk1 Mouse shRNA Plasmid (Locus ID 52163)
Locus ID:	52163
Synonyms:	AI505105; CaMKIalpha; D6Ertd263e
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Camk1 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 52163). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	BC014825, NM_133926, NM_133926.1, NM_133926.2, BC025510, BC042494, BC057155, BC069882
UniProt ID:	Q91YS8

View online »

Summary:

Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK1 signaling cascade and, upon calcium influx, regulates transcription activators activity, cell cycle, hormone production, cell differentiation, actin filament organization and neurite outgrowth. Recognizes the substrate consensus sequence [MVLIF]-x-R-x(2)-[ST]-x(3)-[MVLIF]. Regulates axonal extension and growth cone motility in hippocampal and cerebellar nerve cells. Upon NMDA receptor-mediated Ca(2+) elevation, promotes dendritic growth in hippocampal neurons and is essential in synapses for full long-term potentiation (LTP) and ERK2-dependent translational activation. Downstream of NMDA receptors, promotes the formation of spines and synapses in hippocampal neurons by phosphorylating ARHGEF7/BETAPIX on 'Ser-673', which results in the enhancement of ARHGEF7 activity and activation of RAC1. Promotes neuronal differentiation and neurite outgrowth by activation and phosphorylation of MARK2 on 'Ser-91', 'Ser-92', 'Ser-93' and 'Ser-294'. Promotes nuclear export of HDAC5 and binding to 14-3-3 by phosphorylation of 'Ser-259' and 'Ser-498' in the regulation of muscle cell differentiation. Regulates NUMB-mediated endocytosis by phosphorylation of NUMB on 'Ser-276' and 'Ser-295'. Involved in the regulation of basal and estrogen-stimulated migration of medulloblastoma cells through ARHGEF7/BETAPIX phosphorylation. Is required for proper activation of cyclin-D1/CDK4 complex during G1 progression in diploid fibroblasts. Plays a role in K(+) and ANG2-mediated regulation of the aldosterone synthase (CYP11B2) to produce aldosterone in the adrenal cortex. Phosphorylates EIF4G3/eIF4GII. In vitro phosphorylates CREB1, ATF1, CFTR, MYL9 and SYN1/synapsin I (By similarity).[UniProtKB/Swiss-Prot Function]

shRNA Design:

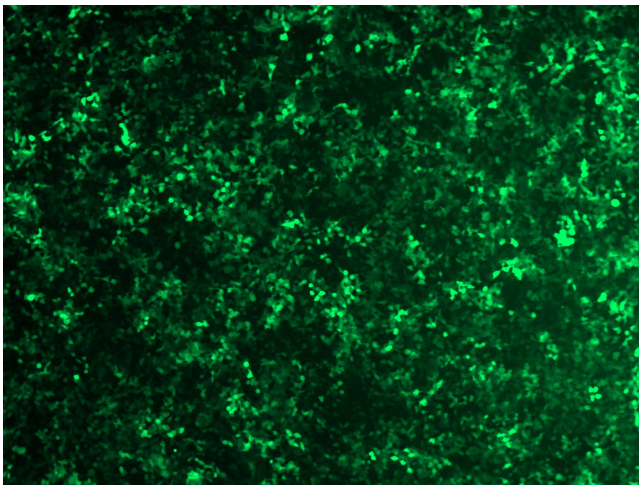
These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

Performance Guaranteed:

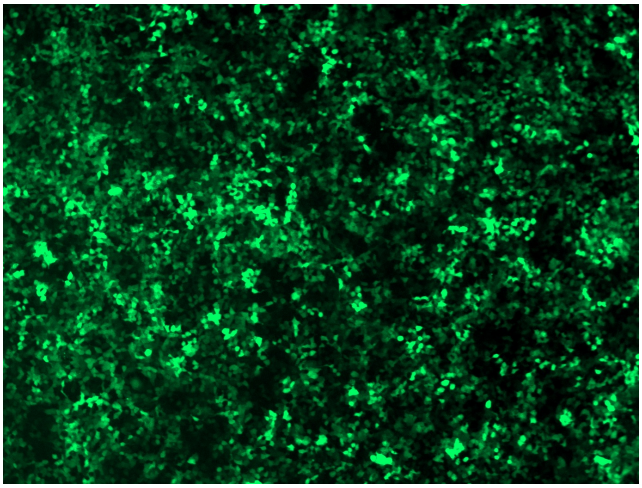
OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).

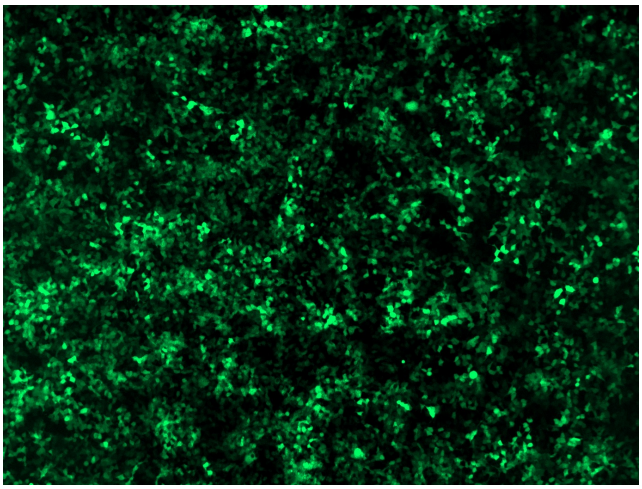
Product images:



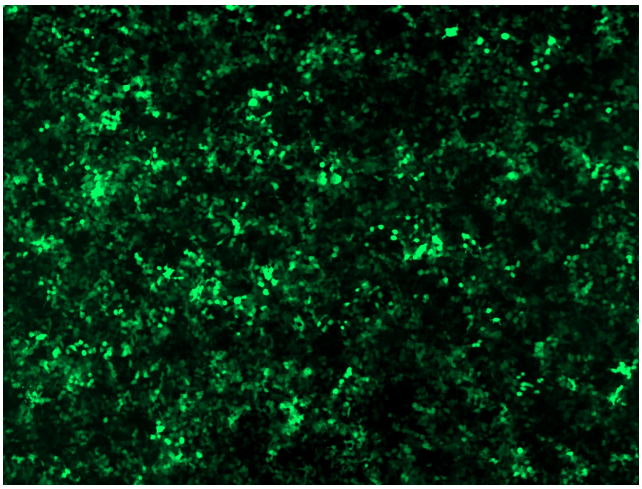
GFP signal was observed under microscope at 48 hours after transduction of TL513385A virus into HEK293 cells. TL513385A virus was prepared using lenti-shRNA TL513385A and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of TL513385B virus into HEK293 cells. TL513385B virus was prepared using lenti-shRNA TL513385B and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL513385C] virus into HEK293 cells. [TL513385C] virus was prepared using lenti-shRNA [TL513385C] and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL513385D] virus into HEK293 cells. [TL513385D] virus was prepared using lenti-shRNA [TL513385D] and [TR30037] packaging kit.