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Product datasheet for TL500600

Mark2 Mouse shRNA Plasmid (Locus ID 13728)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Mark2 Mouse shRNA Plasmid (Locus ID 13728)
Locus ID:	13728
Synonyms:	Emk; EMK-1; Par-1; Par-1b
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Mark2 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 13728). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	BC058556, NM_001080388, NM_001080389, NM_001080390, NM_007928, NM_001080388.1, NM_001080388.2, NM_007928.1, NM_007928.2, NM_007928.3, NM_001080389.2, NM_001080390.1, NM_001080390.2
UniProt ID:	Q05512

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Summary:

Serine/threonine-protein kinase. Involved in cell polarity and microtubule dynamics regulation. Phosphorylates CRTC2/TORC2, DCX, HDAC7, KIF13B, MAP2, MAP4 and RAB11FIP2. Phosphorylates the microtubule-associated protein MAPT/TAU. Plays a key role in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Regulates epithelial cell polarity by phosphorylating RAB11FIP2. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Regulates axogenesis by phosphorylating KIF13B, promoting interaction between KIF13B and 14-3-3 and inhibiting microtubule-dependent accumulation of KIF13B. Also required for neurite outgrowth and establishment of neuronal polarity. Regulates localization and activity of some histone deacetylases by mediating phosphorylation of HDAC7, promoting subsequent interaction between HDAC7 and 14-3-3 and export from the nucleus. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3). Modulates the developmental decision to build a columnar versus a hepatic epithelial cell apparently by promoting a switch from a direct to a transcytotic mode of apical protein delivery. Essential for the asymmetric development of membrane domains of polarized epithelial cells.[UniProtKB/Swiss-Prot Function]

shRNA Design:

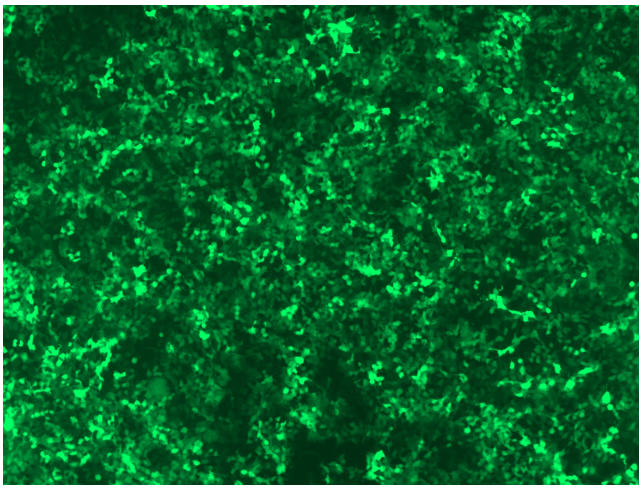
These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

Performance Guaranteed:

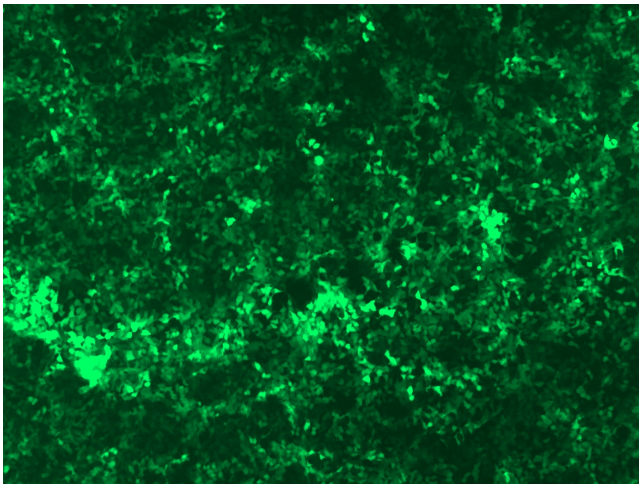
OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. 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).

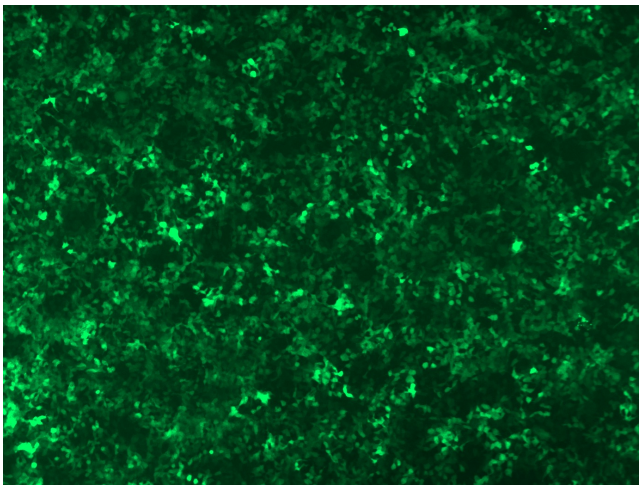
Product images:



GFP signal was observed under microscope at 48 hours after transduction of TL500600A virus into HEK293 cells. TL500600A virus was prepared using lenti-shRNA TL500600A and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL500600C] virus into HEK293 cells. [TL500600C] virus was prepared using lenti-shRNA [TL500600C] and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL500600D] virus into HEK293 cells. [TL500600D] virus was prepared using lenti-shRNA [TL500600D] and [TR30037] packaging kit.