Product datasheet for TR503443

Trpv4 Mouse shRNA Plasmid (Locus ID 63873)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Trpv4 Mouse shRNA Plasmid (Locus ID 63873)
Locus ID:	63873
Synonyms:	0610033B08Rik; OTRPC4; Trp12; VR-OAC; VRL-2; VROAC
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Trpv4 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 63873). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	BC127052, NM_022017, NM_022017.1, NM_022017.2, NM_022017.3
UniProt ID:	Q9EPK8

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Summary:	Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity (PubMed:11094154). Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification (PubMed:12093812, PubMed:14691263, PubMed:16368742, PubMed:16571723). Also activated by heat, low pH, citrate and phorbol esters (PubMed:14691263). Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin-dependent mechanism with a negative feedback mechanism (By similarity). Acts as a regulator of intracellular Ca(2+) in synoviocytes (By similarity). Plays an obligatory role as a molecular component in the nonselective cation channel activation induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and also regulates production of IL-8 (By similarity). Together with PKD2, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). Promotes cell-cell junction formation in skin keratinocytes and plays an important role in the formation and/or maintenance of functional intercellular barriers (PubMed:20413591). Negatively regulates expression of PPARGC1A, UCP1, oxidative metabolism and respiration in adipocytes (PubMed:23021218). Regulates expression of chemokines and cytokines related to proinflammatory pathway in adipocytes (PubMed:23021218). Together with AQP5, controls regulatory volume decrease in salivary epithelial cells (PubMed:16571723). Required for normal development and maintenance of bone and cartilage (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).