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Product datasheet for SR506520

Trpm2 Rat siRNA Oligo Duplex (Locus ID 294329)

Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	`Available with shipment`
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	NM_001011559
UniProt ID:	E9PTA2
Synonyms:	Trpm2-predicted
Components:	Trpm2 (Rat) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 294329) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNAse free siRNA Duplex Resuspension Buffer - 2 ml

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Summary:

Nonselective, voltage-independent cation channel that mediates Na(+) and Ca(2+) influx, leading to increased cytoplasmic Ca(2+) levels (PubMed:16651700, PubMed:16260005, PubMed:11804595, PubMed:16601673, PubMed:19454650). Functions as ligand-gated ion channel. Binding of ADP-ribose to the cytoplasmic Nudix domain causes a conformation change; the channel is primed but still requires Ca(2+) binding to trigger channel opening. Extracellular calcium passes through the channel and increases channel activity (By similarity). Also contributes to Ca(2+) release from intracellular stores in response to ADP-ribose (PubMed:19454650). Plays a role in numerous processes that involve signaling via intracellular Ca(2+) levels (Probable). Besides, mediates the release of lysosomal Zn(2+) stores in response to reactive oxygen species, leading to increased cytosolic Zn(2+) levels (PubMed:25562606). Activated by moderate heat (35 to 40 degrees Celsius) (PubMed:16601673). Activated by intracellular ADP-ribose, beta-NAD (NAD(+)) and similar compounds, and by oxidative stress caused by reactive oxygen or nitrogen species (PubMed:16260005, PubMed:16601673, PubMed:25562606). The precise physiological activators are under debate; the true, physiological activators may be ADP-ribose and ADP-ribose-2'-phosphate. Activation by ADP-ribose and beta-NAD is strongly increased by moderate heat (35 to 40 degrees Celsius) (By similarity). Likewise, reactive oxygen species lower the threshold for activation by moderate heat (37 degrees Celsius). Plays a role in mediating behavorial and physiological responses to moderate heat and thereby contributes to body temperature homeostasis. Plays a role in insulin secretion, a process that requires increased cytoplasmic Ca(2+) levels (PubMed:16601673). Required for normal IFNG and cytokine secretion and normal innate immune immunity in response to bacterial infection. Required for normal phagocytosis and cytokine release by macrophages exposed to zymosan (in vitro). Plays a role in dendritic cell differentiation and maturation, and in dendritic cell chemotaxis via its role in regulating cytoplasmic Ca(2+) levels (By similarity). Plays a role in the regulation of the reorganization of the actin cytoskeleton and filopodia formation in response to reactive oxygen species via its function in increasing cytoplasmic Ca(2+) and Zn(2+) levels (By similarity). Confers susceptibility to cell death following oxidative stress (PubMed:16651700, PubMed:11804595, PubMed:19454650, PubMed:25562606). [UniProtKB/Swiss-Prot Function]

Performance Guaranteed:

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, 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 siRNA control (quantitative RT-PCR data required).