



# SZABO SCANDIC

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## Produktinformation



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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## VRL-1 siRNA (m): sc-42679

### BACKGROUND

Transient receptor potential (Trp) ion channels are a superfamily of six transmembrane segment-spanning, gated cation channels. Trp subtypes mediate store-operated  $Ca^{2+}$  entry, a process involving  $Ca^{2+}$  influx and replenishment of  $Ca^{2+}$  stores formerly emptied through the action of inositol 1,4,5-trisphosphate production and other  $Ca^{2+}$  mobilizing agents. Trp ion channels influence calcium-depletion induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. A subset of Trp channels includes the vanilloid receptor 1 (VR1), VRL-1, and TRPM8, which are involved in temperature perception. VR1 is activated by temperatures exceeding 43° C and by Capsaicin, the main ingredient in hot chili peppers. VRL-1 is activated by extreme temperatures exceeding 52° C, and is expressed in both neuronal and nonneuronal cells. TRPM8 is stimulated by cold temperatures below 22° C as well as methanol. TRPM8 is expressed in a subpopulation of pain and temperature-sensing dorsal root ganglia (DRG) neurons.

### REFERENCES

1. Philipp, S., et al. 1998. A novel capacitative calcium entry channel expressed in excitable cells. *EMBO J.* 17: 4274-4282.
2. Caterina, M.J., et al. 1999. A Capsaicin-receptor homologue with a high threshold for noxious heat. *Nature* 398: 436-441.
3. Hofmann, T., et al. 2000. Transient receptor potential channels as molecular substrates of receptor-mediated cation entry. *J. Mol. Med.* 78: 14-25.
4. Harteneck, C., et al. 2000. From worm to man: three subfamilies of Trp channels. *Trends Neurosci.* 23: 159-166.
5. McKemy, D.D., et al. 2002. Identification of a cold receptor reveals a general role for Trp channels in thermosensation. *Nature* 416: 52-58.
6. Peier, A.M., et al. 2002. A Trp channel that senses cold stimuli and menthol. *Cell* 108: 705-715.
7. Guler, A.D., et al. 2002. Heat-evoked activation of the ion channel, TRPV4. *J. Neurosci.* 22: 6408-6414.

### CHROMOSOMAL LOCATION

Genetic locus: Trpv2 (mouse) mapping to 11 B2.

### PRODUCT

VRL-1 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see VRL-1 shRNA Plasmid (m): sc-42679-SH and VRL-1 shRNA (m) Lentiviral Particles: sc-42679-V as alternate gene silencing products.

For independent verification of VRL-1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42679A, sc-42679B and sc-42679C.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

### STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

VRL-1 siRNA (m) is recommended for the inhibition of VRL-1 expression in mouse cells.

### SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor VRL-1 gene expression knockdown using RT-PCR Primer: VRL-1 (m)-PR: sc-42679-PR (20  $\mu$ l, 594 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.