

# Produktinformation



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# KOR-3 siRNA (m): sc-42151



The Power to Question

#### **BACKGROUND**

Endogenous opioid peptides and opiates like morphine mediate their cellular effects through membrane bound receptors. Three different types of opioid receptors have been identified,  $\mu\text{-type}$ ,  $\delta\text{-type}$  and  $\kappa\text{-type}$ . A fourth opioid receptor, KOR-3 ( $\kappa\text{-type}$  opioid receptor, also designated ORL1-opioid receptor-like 1), has been identified. Though closely related genetically to the other opioid receptors, KOR-3 has a distinct pharmacological profile. Nociceptin, the neuropeptide which activates KOR-3, is structurally similar to the  $\kappa\text{-opioid}$  peptide Dynorphin A, but quite different in its mode of interaction with its receptor. KOR-3 is widely expressed in the nervous system, and is likely to modulate a broad range of physiological and behavioral functions.

# **REFERENCES**

- Mollereau, C., et al. 1994. ORL1, a novel member of the opioid receptor family. Cloning, functional expression and localization. FEBS Lett. 341: 33-38.
- Knapp, R.J., et al. 1995. Molecular biology and pharmacology of cloned opioid receptors. FASEB J. 9: 516-525.
- 3. Meunier, J.C., et al. 1995. Isolation and structure of the endogenous agonist of opioid receptor-like ORL1 receptor. Nature 377: 532-535.
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- 6. Mollereau, C., et al. 1999. Distinct mechanisms for activation of the opioid receptor-like 1 and  $\kappa$ -opioid receptors by Nociceptin and Dynorphin A. Mol. Pharmacol. 55: 324-331.
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### **CHROMOSOMAL LOCATION**

Genetic locus: Oprl1 (mouse) mapping to 2 H4.

#### **PRODUCT**

KOR-3 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  $\mu\text{M}$  solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KOR-3 shRNA Plasmid (m): sc-42151-SH and KOR-3 shRNA (m) Lentiviral Particles: sc-42151-V as alternate gene silencing products.

For independent verification of KOR-3 (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-42151A, sc-42151B and sc-42151C.

## **PROTOCOLS**

See our web site at 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**

KOR-3 siRNA (m) is recommended for the inhibition of KOR-3 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 µM in 66 µl. 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 KOR-3 gene expression knockdown using RT-PCR Primer: KOR-3 (m)-PR: sc-42151-PR (20  $\mu$ I). 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.

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