

# Tachykinin 4 siRNA (m): sc-61636

## BACKGROUND

The tachykinin family consists of amidated neuropeptides that share a carboxy-terminal sequence (Phe-X-Gly-Leu-Met-NH<sub>2</sub>). They are widely distributed within the peripheral and central nervous system and play a role as excitatory neurotransmitters, which are mediated through three types of receptors designated NK-1R, NK-2R and NK-3R. Tachykinin 4, also designated prepro-tachykinin C or PPT-C, encodes hemokinin-1 (HK-1), endokinin A (EKA), endokinin B (EKB), and endokinin D (EKD). These peptides have a widespread peripheral distribution and exhibit significant potency for NK-1R. Hemokinin-1 is similar in potency to Substance P (SP). Both peptides stimulate IFN- $\gamma$  production and are expressed at sites of chronic inflammation, where HK-1 is thought to be an important regulator of B cell development.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Tac4 (mouse) mapping to 11 D.

## RESEARCH USE

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

## PROTOCOLS

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

## PRODUCT

Tachykinin 4 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 Tachykinin 4 shRNA Plasmid (m): sc-61636-SH and Tachykinin 4 shRNA (m) Lentiviral Particles: sc-61636-V as alternate gene silencing products.

For independent verification of Tachykinin 4 (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-61636A, sc-61636B and sc-61636C.

## 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

Tachykinin 4 siRNA (m) is recommended for the inhibition of Tachykinin 4 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 Tachykinin 4 gene expression knockdown using RT-PCR Primer: Tachykinin 4 (m)-PR: sc-61636-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.