

# Tachykinin 4 (C-14): sc-47439

## 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 preprotachykinin 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

- Lai, J.P., et al. 1998. Identification of a  $\delta$  isoform of preprotachykinin mRNA in human mononuclear phagocytes and lymphocytes. *J. Neuroimmunol.* 9: 121-128.
- Kurtz, M.M., et al. 2002. Identification, localization and receptor characterization of novel mammalian substance P-like peptides. *Gene* 296: 205-212.
- Camarda, V., et al. 2002. Pharmacological profile of hemokinin 1: a novel member of the tachykinin family. *Life Sci.* 71: 363-370.
- Page, N.M., et al. 2003. Characterization of the endokinins: human tachykinins with cardiovascular activity. *Proc. Natl. Acad. Sci. USA* 100: 6245-6250.
- Page, N.M. 2004. hemokinins and endokinins. *Cellular and molecular life sciences: Cell. Mol. Life Sci.* 61: 1652-1663.
- Patacchini, R., et al. 2004. Newly discovered tachykinins raise new questions about their peripheral roles and the tachykinin nomenclature. *Trends Pharmacol. Sci.* 25: 1-3.

## CHROMOSOMAL LOCATION

Genetic locus: TAC4 (human) mapping to 17q21.33; Tac4 (mouse) mapping to 11 D.

## SOURCE

Tachykinin 4 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Tachykinin 4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47439 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Tachykinin 4 (C-14) is recommended for detection of Tachykinin 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Tachykinin 1.

Suitable for use as control antibody for Tachykinin 4 siRNA (h): sc-61635, Tachykinin 4 siRNA (m): sc-61636, Tachykinin 4 shRNA Plasmid (h): sc-61635-SH, Tachykinin 4 shRNA Plasmid (m): sc-61636-SH, Tachykinin 4 shRNA (h) Lentiviral Particles: sc-61635-V and Tachykinin 4 shRNA (m) Lentiviral Particles: sc-61636-V.

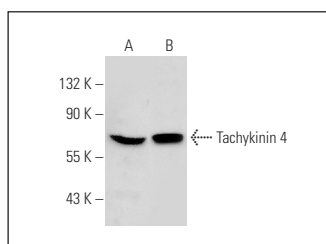
Molecular Weight of Tachykinin 4: 78 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184 or human adrenal gland extract: sc-363761.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Tachykinin 4 (C-14): sc-47439. Western blot analysis of Tachykinin 4 expression in MDA-MB-435S whole cell lysate (A) and human adrenal gland tissue extract (B).

## SELECT PRODUCT CITATIONS

- Pinto, F.M., et al. 2010. Autocrine regulation of human sperm motility by tachykinins. *Reprod. Biol. Endocrinol.* 8: 104.

## RESEARCH USE

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