

# NK-1R (N-19): sc-5218

## BACKGROUND

The substance P receptor, also designated NK-1R for neurokinin 1 receptor, is a member of a class of tachykinin receptors which also includes the NK-2 receptor and the NK-3 receptor. Substance P receptors bind to tachykinin peptides, including substance P, substance K and neuromedin K. NK-1R is likely to be involved in nociceptive transmission, basal ganglia function or anxiety and depression. NK-1R is expressed in a high proportion of spinothalamic and spinobrachial neurons located in lamina 1. NK-1R neurons in the dorsal horn of the spinal cord may play a role in chronic neuropathic and inflammatory pain. Ligand-induced internalization of NK-1R into early endosomes deplete the cell surface of these receptors. This internalization may be involved in a downregulation response of a cell to substance P.

## CHROMOSOMAL LOCATION

Genetic locus: TACR1 (human) mapping to 2p12; Tacr1 (mouse) mapping to 6 C3.

## SOURCE

NK-1R (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NK-1R of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NK-1R (N-19) is recommended for detection of NK-1R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NK-1R (N-19) is also recommended for detection of NK-1R in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NK-1R siRNA (h): sc-36069, NK-1R siRNA (m): sc-36070, NK-1R shRNA Plasmid (h): sc-36069-SH, NK-1R shRNA Plasmid (m): sc-36070-SH, NK-1R shRNA (h) Lentiviral Particles: sc-36069-V and NK-1R shRNA (m) Lentiviral Particles: sc-36070-V.

Molecular Weight (predicted) of NK-1R: 46 kDa.

Molecular Weight (observed) of NK-1R glycosylation: 74/101 kDa.

Positive Controls: mouse pancreas extract: 364244, CCD-1064Sk cell lysate: sc-2263 or K-562 whole cell lysate: sc-2203.

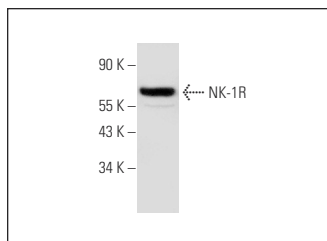
## STORAGE

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

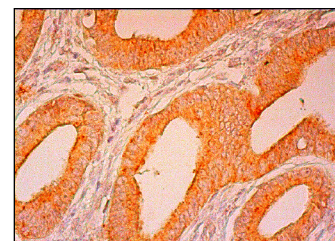
## RESEARCH USE

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

## DATA



NK-1R (N-19): sc-5218. Western blot analysis of NK-1R expression in mouse pancreas tissue extract.



NK-1R (N-19): sc-5218. Immunoperoxidase staining of formalin fixed, paraffin-embedded human premenopausal uterus tissue showing cytoplasmic staining of glandular cells and cells in endometrial stroma.

## SELECT PRODUCT CITATIONS

- Santoni, G., et al. 2002-2003. Expression of substance P and its neurokinin-1 receptor on thymocytes: functional relevance in the regulation of thymocyte apoptosis and proliferation. *Neuroimmunomodulation* 10: 232-246.
- Zee, E.D., et al. 2006. Hypoxia upregulates lung microvascular neurokinin-1 receptor expression. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 291: L102-L110.
- Weidenhofer, J., et al. 2006. Immunohistochemical localisation of the NK1 receptor in the human amygdala: preliminary investigation in schizophrenia. *Prog. Neuropsychopharmacol. Biol. Psychiatry* 30: 1313-1321.
- Mathers, A., et al. 2007. *In vivo* signaling through the neurokinin 1 receptor favors transgene expression by Langerhans cells and promotes the generation of Th1- and Tc1-biased immune responses. *J. Immunol.* 178: 7006-7017.
- Ravina, C.G., et al. 2007. A role for tachykinins in the regulation of human sperm motility. *Hum. Reprod.* 22: 1617-1625.
- Strell, C., et al. 2009. Divergent effects of norepinephrine, dopamine and substance P on the activation, differentiation and effector functions of human cytotoxic T lymphocytes. *BMC Immunol.* 10: 62.
- Murphy, S.R., et al. 2012. Postnatal exposure history and airways: oxidant stress responses in airway explants. *Am. J. Respir. Cell Mol. Biol.* 47: 815-823.
- Lim, Y.Y., et al. 2012. A comparison of neuropeptide expression in skin with allergic contact dermatitis in human and mouse. *Int. J. Dermatol.* 51: 939-946.

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Try **NK-1R (D-11): sc-365091** or **NK-1R (F-3): sc-514453**, our highly recommended monoclonal alternatives to NK-1R (N-19).