SANTA CRUZ BIOTECHNOLOGY, INC.

NK-2R (C-21): sc-14121

BACKGROUND

Substance P (SP) and Neurokinin-A (NK-A) are members of the Tachykinins, and they function as modulators of the immune and hematopoietic systems. The Tachykinins interact with each of three cloned neurokinin (NK) receptors (NK-1R, NK-2R, NK-3R), with SP and NK-A exhibiting binding preferences for NK-1R and NK-2R, respectively. NK-4R shares close homology with NK-3R, and both have nearly identical pharmacologicl properties. In the normal ileum and colon, NK-1R and NK-2R are localized to smooth muscle cells of the muscularis mucosae and propria and to a few inflammatory cells of the lamina propria. NK-1R expression is also found in the muscular wall of submucosal blood vessels, enteric neurons and, to a lesser degree, in surface epithelial cells. NK-3R is found in the spinal cord in both lamina X and lamina II.

REFERENCES

1. Rameshwar, P. and Gascon, P. 1995. Substance P (SP) mediates production of stem cell factor and interleukin-1 in bone marrow stroma: potential autoregulatory role for these cytokines in SP receptor expression and induction. Blood 86: 482-490.
2. Rameshwar, P. and Gascon, P. 1997. Hematopoietic modulation by the tachykinins. Acta Haematol. 98: 59-64.
3. Zerari, F., et al. 1997. Immunoelectron microscopic localization of NK-3 receptor in the rat spinal cord. Neuroreport 8: 2661-2664.
4. Renzi, D., et al. 2000. Substance P (neurokinin-1) and neurokinin A (neurokinin-2) receptor gene and protein expression in the healthy and inflamed human intestine. Am. J. Pathol. 157: 1511-1522.

CHROMOSOMAL LOCATION

Genetic locus: TACR2 (human) mapping to 10q22.1.

SOURCE

NK-2R (C-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NK-2R of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14121 P, (100 µg 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

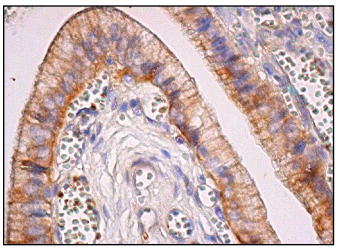
NK-2R (C-21) is recommended for detection of NK-2R of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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).

Suitable for use as control antibody for NK-2R siRNA (h): sc-42292, NK-2R shRNA Plasmid (h): sc-42292-SH and NK-2R shRNA (h) Lentiviral Particles: sc-42292-V.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NK-2R (C-21): sc-14121. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Jaafari, N., et al. 2007. Distribution pattern of Tachykinin NK2 receptors in human colon: involvement in the regulation of intestinal motility. J. Comp. Neurol. 503: 381-391.
2. Cipriani, G., et al. 2011. Effect of otilonium bromide and ibodutant on the internalization of the NK2 receptor in human colon. Neurogastroenterol. Motil. 23: 96-102.
3. Cipriani, G., et al. 2011. NK receptors, Substance P, Ano1 expression and ultrastructural features of the muscle coat in Cav-1$^{-/-}$ mouse ileum. J. Cell. Mol. Med. 15: 2411-2420.