



## NK-2R (G-15): sc-22050

### 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 pharmacological 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 sub-mucosal 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., Karpitskiy, V., Krause, J., Descarries, L., and Couture, R. 1997. Immunoelectron microscopic localization of NK-3 receptor in the rat spinal cord. *Neuroreport* 8: 2661-2664.
4. Renzi, D., Pellegrini, B., Tonelli, F., Surrenti, C., and Calabro, A. 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.
5. Sarau, H.M., Mooney, J.L., Schmidt, D.B., Foley, J.J., Buckley, P.T., Giardina, G.A., Wang, D.Y., Lee, J.A., and Hay, D.W. 2000. Evidence that the proposed novel human "neurokinin-4" receptor is pharmacologically similar to the human neurokinin-3 receptor but is not of human origin. *Mol. Pharmacol.* 58: 552-559.

### SOURCE

NK-2R (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NK-2R of mouse 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-22050 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

NK-2R (G-15) is recommended for detection of NK-2R of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

### 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) 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.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.