

Substance P (N-18): sc-9758

BACKGROUND

Substance P (also designated NK-1) is an active peptide, known as a Tachykinin, that affects diverse functions, including blood pressure regulation, peristalsis of the gut, salivation and the modulation of cellular immunity. Fragments of Substance P have differential binding capacities for Substance P receptors and have varying biological activities. For example, two amino-terminal fragments of Substance P are able to evoke an increase in GABA release. NK-1 receptor (NK-1R), also designated Substance P receptor, binds to Tachykinin peptides, including Substance P, Substance K and Neuromedin K. In response to Substance P binding, NK-1R signals IL-12 production.

CHROMOSOMAL LOCATION

Genetic locus: TAC1 (human) mapping to 7q21.3; Tac1 (mouse) mapping to 6 A1.

SOURCE

Substance P (N-18) is an affinity purified goat polyclonal antibody raised against a peptide corresponding to full length mature of Substance P 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-9758 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Substance P (N-18) is recommended for detection of Substance P and protachykinin 1 precursor of mouse, rat and 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), 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).

Substance P (N-18) is also recommended for detection of Substance P and protachykinin 1 precursor in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Preprotachykinin 1 siRNA (h): sc-42297, Preprotachykinin 1 siRNA (m): sc-42298, Preprotachykinin 1 shRNA Plasmid (h): sc-42297-SH, Preprotachykinin 1 shRNA Plasmid (m): sc-42298-SH, Preprotachykinin 1 shRNA (h) Lentiviral Particles: sc-42297-V and Preprotachykinin 1 shRNA (m) Lentiviral Particles: sc-42298-V.

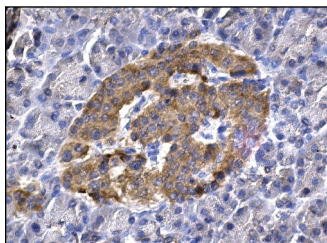
STORAGE

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



Substance P (N-18): sc-9758. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Winston, J.H., et al. 2003. Acute pancreatitis results in referred mechanical hypersensitivity and neuropeptide up-regulation that can be suppressed by the protein kinase inhibitor k252a. *J. Pain* 4: 329-337.
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3. Denadai-Souza, A., et al. 2010. PAR(2) and temporomandibular joint inflammation in the rat. *J. Dent. Res.* 89: 1123-1128.
4. Haas, S., et al. 2010. Low density of sympathetic nerve fibers relative to substance P-positive nerve fibers in lesional skin of chronic pruritus and prurigo nodularis. *J. Dermatol. Sci.* 58: 193-197.
5. Harrington, A.M., et al. 2010. Immunoreactivity for high-affinity choline transporter colocalises with VACHT in human enteric nervous system. *Cell Tissue Res.* 341: 33-48.
6. Harrington, A.M., et al. 2010. Localization of muscarinic receptors M1R, M2R and M3R in the human colon. *Neurogastroenterol. Motil.* 22: 999-1008.
7. Vellani, V., et al. 2011. Functional endothelin receptors are selectively expressed in isolectin B4-negative sensory neurons and are upregulated in isolectin B4-positive neurons by neurturin and glia-derived neurotrophic factor. *Brain Res.* 1381: 31-37.
8. Barry, C.M., et al. 2011. Characterizing the role of the neuropeptide substance P in experimental subarachnoid hemorrhage. *Brain Res.* 1389: 143-151.
9. Turner, R.J., et al. 2011. A substance P antagonist improves outcome when administered 4 h after onset of ischaemic stroke. *Brain Res.* 1393: 84-90.
10. Arnold, J., et al. 2012. Neuroimmunomodulatory alterations in non-lesional peritoneum close to peritoneal endometriosis. *Neuroimmunomodulation* 20: 9-18.