

Product Datasheet

NK1R Antibody NB300-101SS

Unit Size: 0.025 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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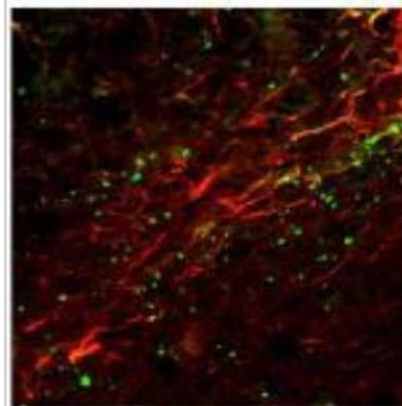


NB300-101SS**NK1R Antibody**

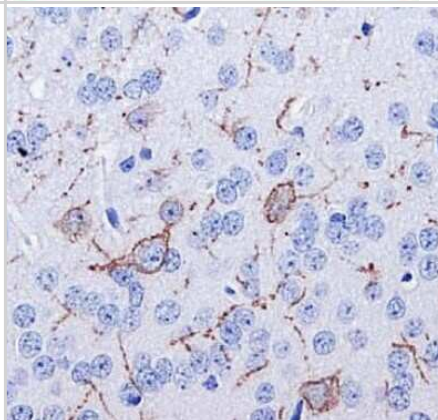
Product Information	
Unit Size	0.025 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	No Preservative
Isotype	IgG
Purity	Unpurified
Buffer	Whole antisera
Product Description	
Host	Rabbit
Gene ID	6869
Gene Symbol	TACR1
Species	Human, Mouse, Rat, Guinea Pig
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: canine (92%)
Specificity/Sensitivity	NB300-101 is specific to the NK-1 receptor. Specificity was verified by the localization of immunohistochemical staining with NB300-101 in the neurons of mouse brain tissue.
Immunogen	A synthetic peptide corresponding to the C-terminus of rat Neurokinin 1 Receptor, conjugated to bovine thyroglobulin. [UniProt# P14600]
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:100-1:2000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:50, Immunohistochemistry-Paraffin reported in scientific literature (PMID 23792204), Immunohistochemistry-Frozen 1:1000

Images

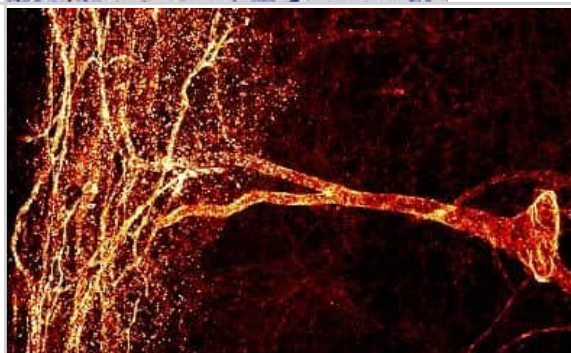
Immunocytochemistry/Immunofluorescence: Neurokinin 1 Receptor Antibody [NB300-101] - IF analysis of Neurokinin 1 Receptor in rat brain tissue. Image courtesy of anonymous customer product review.



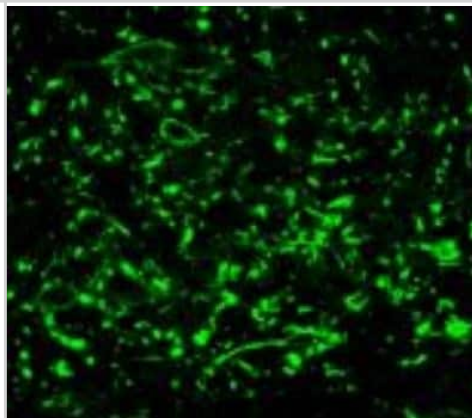
Immunohistochemistry: Neurokinin 1 Receptor Antibody [NB300-101] - Immunohistochemical analysis of Neurokinin 1 Receptor in mouse brain (selected cells, axon & dendrites) using NB300-101.



Immunocytochemistry/Immunofluorescence: Neurokinin 1 Receptor Antibody [NB300-101] - Confocal image of SPR reactivity using polyclonal anti-NK-1 Receptor (NB 300-101) in a lamina III neuron in the spinal cord of a rat.



Immunocytochemistry/Immunofluorescence: Neurokinin 1 Receptor Antibody [NB300-101] - IF analysis of Neurokinin 1 Receptor in rat brain tissue. Image courtesy of anonymous customer product review.



Publications

Huang R, Worrell J, Garner E, Wang S et Al. Epidural electrical stimulation of the cervical spinal cord opposes opioid-induced respiratory depression J Physiol 2022-05-31 [PMID: 35639046]

JE Lim, E Chung, Y Son A neuropeptide, Substance-P, directly induces tissue-repairing M2 like macrophages by activating the PI3K/Akt/mTOR pathway even in the presence of IFN γ Sci Rep, 2017-08-25;7(1):9417. 2017-08-25 [PMID: 28842601]

Cui Y, Wang X, Xu Y et al. Ropivacaine promotes axon regeneration by regulating Nav1.8-mediated macrophage signaling after sciatic nerve injury in rats Anesthesiology 2023-09-05 [PMID: 37669448] (IHC-Fr, Rat)

Lonndahl L, Rasul A, Lonne-Rahm SB et al. Tachykinin upregulation in atopic dermatitis Immunopharmacol Immunotoxicol 2019-02-18 [PMID: 30773959] (IF/IHC, Human)

Li Z, Luo T, Ning X et al. Neurokinin-1 receptor antagonism improves postoperative neurocognitive disorder in mice. Neuroscience Letters 2018-09-01 [PMID: 30273701] (WB, Mouse)

Li X, Guo R, Sun Y et al. Botulinum toxin type A and gabapentin attenuate postoperative pain and NK1 receptor internalization in rats. Neurochem. Int. 2018-03-20 [PMID: 29572051] (ICC/IF, Rat)

Morinaga R, Nakamuta N, Yamamoto Y. Hypoxia-induced increases in serotonin-immunoreactive nerve fibers in the medulla oblongata of the rat. Acta Histochem. 2016-10-01 [PMID: 27825705] (WB, Rat)

Davis BJ, Smith HM. Neurokinin-1 receptor immunoreactivity in the nucleus of the solitary tract in the hamster. Neuroreport 1999-04-06 [PMID: 10321475]

Li W, Fotinos A, Wu Q et al. N-acetyl-L-tryptophan delays disease onset and extends survival in an amyotrophic lateral sclerosis transgenic mouse model. Neurobiol. Dis. 2015-05-16 [PMID: 25986728] (WB, Mouse)

Amadoro G, Pieri M, Ciotti MT et al. Substance P provides neuroprotection in cerebellar granule cells through Akt and MAPK/Erk activation: evidence for the involvement of the delayed rectifier potassium current. Neuropharmacology 2007-05-01 [PMID: 17397881] (Rat)

Broccardo M, Ciotti MT, Linari G et al. Immunocytochemical distribution of NK-1 and NK-3 tachykinin receptors in isolated pancreatic acini of guinea pigs and rats. Peptides 2005-11-01 [PMID: 15970359]

Wu XN, Zhang T, Qian NS et al. Antinociceptive effects of endomorphin-2: Suppression of substance P release in the inflammatory pain model rat Neurochem. Int. 2015-02-07 [PMID: 25661513] (IHC-Fr, Rat)

Details:

NK1R antibody used for IHC-Fr application on Rat's spinal cord in experiments involving complete Freund's adjuvant/CFA inflammatory pain model - tissues removed after 7 days of CFA injection induced inflammation, paraformaldehyde perfusion, cryoprotection with 30% sucrose -0.1M PBS pH7.4, 10um cryosections, primary used at 1:1000 dilution, detection with FITC-labeled donkey anti-rabbit IgG secondary antibody (Fig. 6G and 6I)

More publications at <http://www.novusbio.com/NB300-101>



Procedures

Immunohistochemistry Protocol for Neurokinin 1 Receptor Antibody (NB300-101)

Immunohistochemistry

- 1) Perfuse rat through the ascending aorta with 500 ml. of 0.1 M phosphate buffered saline (PBS) (pH 7.4 @ 4 degrees C), followed by 750 ml. of PBS containing 4% formaldehyde and 12.5% picric acid (pH 6.9, 4 degrees C). Tissue of interest is then dissected and post-fixed in PBS containing 4% formaldehyde and 12.5% picric acid (pH 6.9 at 4 degrees C) for at least 4 hours, followed by fixation in PBS containing 30% sucrose (pH 7.4, 4 degrees C) for at least 24 hours. Until the tissue sinks.
- 2) Cut fixed sections at 60 um using a sliding microtome.
- 3) If using culture cells, remove media and perform 2-3 washes in PBS (pH 7.4) -use same protocol without agitation.
- 4) Place tissue section in microcentrifuge tubes containing 1 ml. Of PBS, pH 7.4 as they are being cut. Wash sections (in PBS) on an upright rotator for 10-15 minutes.
- 5) Remove PBS and add 1 ml. of blocking solution (PBS + 1% normal donkey serum (NDS) + 0.3% triton X-100).
- 6) Incubate tissue sections in blocking solution for 30 minutes at room temperature (RT) on rotator.
- 7) Remove blocking solution and add anti-neurokinin-1 receptor or anti-Neurokinin-3 receptor(NB 300-101/NB 100-102) antibody +PBS + 1% NDS + 0.3% triton X-100 + NB 300-101/102 @ 1:100~1:1000
- 8) Incubate overnight on rotator at RT.
- 9) Remove primary antisera and perform 3 x 10 minute PBS washes (1ml volume) on rotator.
- 10) Add 1 ml. of secondary antibody and incubate for 2 hours at RT on rotator.
-PBS + 1% NDS + 0.3% triton X 100 + anti-rabbit Cy3 (Jackson Immunoresearch Labs) at 1:600
- 11) Perform 3 X 10 minute PBS washes (1 ml volume) on rotator
- 12) Mount tissue sections on gelatin coated slides and allow tissue to dry
- 13) Run slides through alcohol gradients (70%, 90%, 100%, xylene) leaving slide in each alcohol and xylene for 2 minutes
- 14) Coverslip with DPX mountant (FLUKA) ** Note: 24 well plates may be substituted for microcentrifuge tubes. Use flat top bench rotator instead of upright rotator.



Novus Biologicals USA

10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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