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NK3R Antibody
Catalog # ASC10550

Specification

NK3R Antibody - Product Information

Application	**IF**
Primary Accession	P29371
Other Accession	P29371, 6870
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 51 kDa** **Observed: 45 kDa KDa**
Application Notes	**NK3R antibody can be used for detection of NK3R by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

NK3R Antibody - Additional Information

Gene ID **6870**

Target/Specificity
NK3R antibody was raised against a 18 amino acid synthetic peptide from near the center of human NK3R.

The immunogen is located within amino acids 370 - 420 of NK3R.

Reconstitution & Storage
Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

Precautions
NK3R Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

NK3R Antibody - Protein Information

Name TACR3

Synonyms NK3R, TAC3R

Function
This is a receptor for the tachykinin neuropeptide neuromedin-K (neurokinin B). It is associated with G proteins that activate a phosphatidylinositol-calcium second messenger system. The rank order of affinity of this receptor to tachykinins is: neuromedin-K > substance K > substance P.

Cellular Location
Cell membrane; Multi-pass membrane protein.

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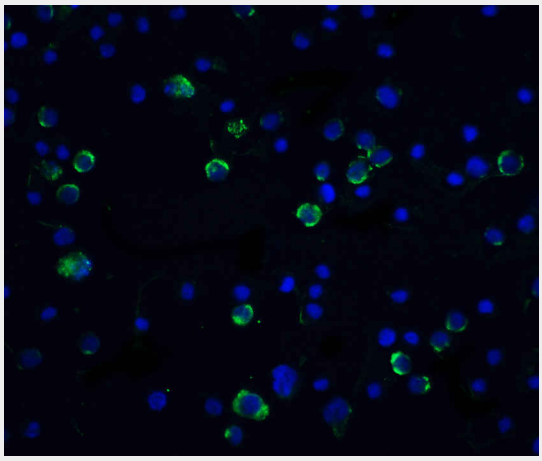
NK3R Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NK3R Antibody - Images



Immunofluorescence of Caspase-10 in HeLa cells with Caspase-10 antibody at 5 µg/ml.

NK3R Antibody - Background

NK3R Antibody: The tachykinins are a family of small peptides that include the neurotransmitters substance P, neurokinin A, and neurokinin B, which can act on three related but distinct seven transmembrane G-proteins coupled receptors, albeit at different concentrations. The NK-3 receptor (NK3R) has greatest affinity for neurokinin B and is highly expressed in the supraoptic and paraventricular nuclei. Following binding of its ligand, NK3R activates a phosphatidylinositol-calcium second messenger system. It is likely these signals lead to the release of vasopressin and oxytocin into the circulation. NK3R may be involved in learning and memory as mice lacking this gene expressed cognitive deficits compared to normal mice. Although it has been suggested that NK3R plays a role in the regulation of vagal afferent relay neurons, it is likely that these receptors are activated by substance P or neurokinin A, as the airway nerves do not express neurokinin B.

NK3R Antibody - References

Maggi CA. The mammalian tachykinin receptors. Gen. Pharmacol. 1995; 26:911-44.
Ding Y-Q, Shi J, Su L-Y, et al. Receptor (NK3)-containing neurons in the paraventricular and supraoptic nuclei of the rat hypothalamus synthesize vasopressin and express fos following intravenous injection of hypotonic saline. Neurosci. 1999; 91:1077-85.
Nakajima Y, Tsuchida K, Negishi M, et al. Direct linkage of three tachykinin receptors to stimulation of both phosphatidylinositol hydrolysis and cyclic AMP cascades in transfected Chinese hamster ovary cells. J. Biol. Chem. 1992; 267:2437-42.

Haley GE and Flynn FW. Tachykinin NK3 receptor contribution to systemic release of vasopressin and oxytocin in response to osmotic and hypotensive challenge. Am. J. Regul. Integr. Comp. Physiol. 2007; 293:R931-7.