

# NK3R (IN) antibody (pAb)

Rabbit Anti-Human/Mouse NK3R (IN)

## Instruction Manual

Catalog Number	PK-AB718-4255
Synonyms	NK3R Antibody: Neurokinin B receptor, NK-3 receptor, NK-3R, Tachykinin receptor 3, TACR3
Description	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 does not recognize NK1R or NK2R.
Quantity	100 µg
Source / Host	Rabbit
Immunogen	NK3R antibody was raised in rabbits against an 18 amino acid peptide from near the center of human NK3R.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human, Mouse
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Applications	E, WB, IHC, IF Note: Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually.  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.
Images	Available upon request.
References	Maggi CA. The mammalian tachykinin receptors. <i>Gen. Pharmacol.</i> 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. <i>Neurosci.</i> 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. <i>J. Biol. Chem.</i> 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. <i>Am. J. Regul. Integr. Comp. Physiol.</i> 2007; 293:R931-7.
Images	Available upon request.
Related Products	Cat.No. PK-AB718-4255P; NK3R Peptide  Cat.No. PK-AB718-1283; RAW264.7 Cell Lysate

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