



Qty: 100 µg/200 µL

Mouse anti-NK1 Receptor

Catalog No. 39-6100

Lot No.

Mouse anti-NK1 Receptor

FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: ZN003

ISOTYPE: Mouse IgG₁-kappa

IMMUNOGEN

Synthetic peptide derived from an internal sequence of the human, mouse, and rat NK1 receptor proteins

SPECIFICITY

This antibody is specific for the NK1 receptor (TACR1, tachykinin receptor 1, substance P receptor, NK1R, neurokinin 1 receptor, SPR) protein. On Western blots, it identifies the target band at ~50 kDa.

REACTIVITY

Reactivity has been confirmed with human U937 and insect Sf9 cell lysates and rat brain homogenates. Based on amino acid sequence identity, reactivity with mouse is expected.

Sample	ELISA	Western Blotting
Human	ND	++
Mouse	ND	ND
Rat	ND	+++
Insect	ND	+++
Immunogen	+++	N/A

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)
0* No reactivity observed under conditions tested.

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1 µg/mL
Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI396100

(Rev 10/08) DCC-08-1089

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BACKGROUND

The NK1 receptor (neurokinin 1 receptor, TACR1, substance P receptor, NK1R, SPR, tachykinin receptor 1) belongs to the tachykinin family, an evolutionary conserved family of peptide neurotransmitters that share the c-terminal sequence Phe-X-Leu-Met-NH₂ and has an established role in neurotransmission.¹ The mammalian tachykinins include substance P, neurokinin A (NKA) and neurokinin B (NKB) and exert their effects by binding to specific receptors. Three tachykinin receptors (NK1, NK2 and NK3) have been characterized, and they have preferential affinities for SP, NKA and NKB respectively.² Tachykinin peptides are important in the mediation of many physiological and pathological processes including inflammation, pain, migraine headaches and allergy-induced asthma.

NK1R-activated signal transduction pathways and activation of low-threshold (T-type) voltage-gated calcium channels synergistically facilitate activity- and calcium-dependent long-term potentiation at synapses from nociceptive nerve fibers. This process allows for the retention of memory traces of painful events.³

REFERENCES

1. Hopkins B, et al. *Biochem Biophys Res Commun* 180:1110-1117, 1991.
2. Wagner U, et al. *Neuropeptides* 33(1):55-61, 1999.
3. Ikeda H, et al. *Science* 299:1237-1240, 2003.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

Conjugate	ZyMAX[™] Goat x Rabbit IgG (H+L)	ZyMAX[™] Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy [™] 3	81-6115	81-6515
Cy [™] 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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