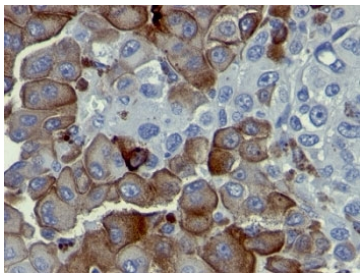
CD271 Antibody NGFR5 / Nerve Growth Factor Receptor Antibody [clone NGFR5] (V2763)

Catalog No.	Formulation	Size
V2763-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2763-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2763SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2763IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Citations (10)

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	NGFR5
Purity	Protein G affinity chromatography
UniProt	P08138
Localization	Cell surface and cytoplasmic
Applications	Flow cytometry: 0.5-1ug/10^6 cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This CD271 Antibody NGFR5 / Nerve Growth Factor Receptor Antibody is available for research use only.



CD271 Antibody NGFR5 by IHC in Human Melanoma. Immunohistochemistry staining of FFPE human melanoma tissue using mouse monoclonal CD271 antibody NGFR5. Strong brown immunoreactivity is observed in clusters of tumor cells, with predominantly membranous and peripheral cytoplasmic staining. Positive cells are interspersed with more weakly stained areas, demonstrating heterogeneous expression of nerve growth factor receptor (NGFR), also known as p75NTR. Heat-induced epitope retrieval was performed using 10 mM citrate buffer, pH 6, for 10-20 minutes, followed by cooling at room temperature for 20 minutes.

Description

CD271 Antibody NGFR5 recognizes the p75 neurotrophin receptor, a transmembrane glycoprotein encoded by the NGFR gene. Also known as nerve growth factor receptor, p75NTR, and TNFRSF16, CD271 belongs to the tumor necrosis factor receptor superfamily. It regulates neuronal development, survival, differentiation, and apoptosis through interactions with neurotrophins and associated signaling proteins. Its expression in neural crest-derived cells and selected non-neural tissues makes CD271 an important marker in neuroscience, developmental biology, and cancer research.

The nerve growth factor receptor contains four extracellular cysteine-rich domains, a transmembrane region, and an intracellular death domain. Unlike Trk receptors, CD271 lacks intrinsic tyrosine kinase activity and depends on signaling partners to regulate cellular responses. It binds nerve growth factor (NGF), brain-derived neurotrophic factor (BDNF), and other neurotrophins. Depending on receptor complexes and cellular context, these interactions can influence neuronal survival, programmed cell death, and cytoskeletal organization.

CD271 participates in signaling pathways involving NF-kappaB, JNK, and RhoA, which influence neurite extension, cellular migration, and responses to injury. During peripheral nervous system development, NGFR is expressed by neural crest cells, developing neurons, and Schwann cell precursors. Expression can increase following nerve injury, reflecting its involvement in axonal regeneration and Schwann cell responses. CD271 is also used to identify certain mesenchymal stromal cell populations with distinct differentiation characteristics.

In cancer research, nerve growth factor receptor expression is particularly relevant to melanoma, including desmoplastic and neurotropic melanoma, where CD271 can help characterize tumor cells exhibiting neural differentiation. Expression has also been investigated in neuroblastoma and other neural crest-associated tumors. Its biological effects vary with tumor type, differentiation state, and interactions with the surrounding microenvironment.

Immunohistochemical and flow cytometric detection of CD271 can provide information about receptor expression and cellular distribution. Clone NGFR5 has been used in research investigating neurotrophin receptor expression and cellular phenotypes. A CD271 Antibody NGFR5 from NSJ Bioreagents supports investigations of nerve growth factor receptor expression, neuronal differentiation, melanoma biology, and neurotrophin-associated signaling.

For an alternative antibody targeting the same neurotrophin receptor, see our NGFR Antibody NGFR/4919, a mouse monoclonal antibody featuring human melanoma IHC and protein microarray specificity validation.

Application Notes

Optimal dilution of the CD271 Antibody NGFR5 / Nerve Growth Factor Receptor Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

NGFR from A875 melanoma cells was used as the immunogen for the CD271 Antibody NGFR5. Its epitope has been localized to amino acids 1-160 of the extracellular domain of NGFR/NTR.

Storage

Store the CD271 Antibody NGFR5 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

NGFR antibody, p75NTR antibody, TNFRSF16 antibody, NGF Receptor antibody, p75 NGF Receptor antibody, Low Affinity Nerve Growth Factor Receptor antibody, p75 Neurotrophin Receptor antibody

Ordering: Phone: 858.663.9055 | Fax: 1.267.821.0800 | Email: info@nsjbio.com
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