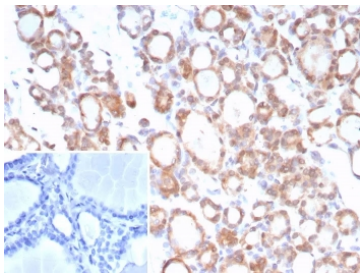
TrkB Antibody / NTRK2 [clone NTRK2/7929] (V5601)

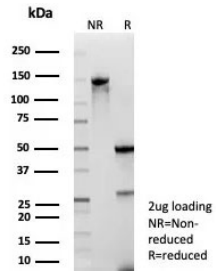
Catalog No.	Formulation	Size
V5601-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5601-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5601SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, Lambda
Clone Name	NTRK2/7929
Purity	Protein A/G affinity
UniProt	Q16620
Localization	Cell surface, cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This TrkB antibody is available for research use only.



Immunohistochemistry analysis of TrkB / NTRK2 antibody (clone NTRK2/7929) in human thyroid tissue. FFPE human thyroid tissue shows membranous and cytoplasmic HRP-DAB brown staining in follicular epithelial cells, while surrounding stromal elements are largely negative. The inset shows the negative control with PBS used in place of the primary antibody, demonstrating absence of HRP-DAB brown signal. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free TrkB antibody (clone NTRK2/7929) as confirmation of integrity and purity.

Description

TrkB antibody recognizes Neurotrophic receptor tyrosine kinase 2, encoded by the NTRK2 gene, a member of the Trk family of receptor tyrosine kinases that also includes TrkA and TrkC. NTRK2 is commonly referred to as TrkB, Tropomyosin receptor kinase B, or tyrosine kinase receptor B, and functions as a high-affinity receptor for brain-derived neurotrophic factor (BDNF) and neurotrophin-4 (NT-4). TrkB antibody is widely used to evaluate neuronal signaling pathways, neurodevelopmental biology, and oncogenic NTRK2 alterations in research settings.

TrkB is a transmembrane glycoprotein composed of an extracellular ligand-binding domain, a single-pass transmembrane region, and an intracellular tyrosine kinase domain. Upon ligand binding, TrkB undergoes dimerization and autophosphorylation on key tyrosine residues, initiating downstream signaling through MAPK, PI3K-AKT, and PLC-gamma pathways. These cascades regulate neuronal survival, synaptic plasticity, axonal growth, and differentiation. In the central nervous system, NTRK2 is highly expressed in cortical neurons, hippocampal neurons, and cerebellar granule cells, where it plays a critical role in long-term potentiation and memory formation.

Multiple isoforms of TrkB have been described, including full-length kinase-active forms and truncated variants lacking the intracellular kinase domain. These isoforms exhibit distinct functional roles, with truncated TrkB forms modulating ligand availability and signaling dynamics. A TrkB antibody can assist in distinguishing expression patterns across tissues and experimental models, supporting studies of isoform distribution and receptor regulation.

Beyond the nervous system, NTRK2 expression has been reported in certain epithelial and mesenchymal tissues, and aberrant TrkB signaling has been implicated in tumor progression, invasion, and resistance to apoptosis. NTRK gene fusions involving NTRK2 have also been identified in a subset of solid tumors, highlighting the importance of reliable detection tools. In cancer research, TrkB antibody supports the investigation of receptor overexpression, activation status, and potential therapeutic targeting strategies.

Subcellular localization of TrkB includes the plasma membrane, where ligand engagement occurs, as well as intracellular vesicular compartments involved in receptor trafficking and signaling endosomes. Co-localization with adaptor proteins such as SHC1 and downstream kinases underscores its integration within broader growth factor signaling networks. A TrkB antibody is suitable for detecting NTRK2 expression in relevant research applications including immunohistochemistry, western blot, and immunofluorescence analyses.

Clone NTRK2/7929 is a monoclonal antibody designed to target TrkB protein in research samples, enabling consistent and specific detection of Neurotrophic receptor tyrosine kinase 2 in normal and disease-associated tissues.

Application Notes

Optimal dilution of the TrkB antibody should be determined by the researcher.

Immunogen

A recombinant fragment (within amino acids 250-450) of human NTRK2 protein was used as the immunogen for the TrkB antibody.

Storage

Aliquot the TrkB antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.