

Active Recombinant Human NTRK2, Fc Chimera

Cat. No. NTRK2-109H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Humantyrrosine kinase receptor B was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified <i>human 293 cells</i> .
Species	Human
Source	HEK293
Description	The tropomyosin-related kinase (Trk) family consists of TrkA, TrkB and TrkC. TrkB is a high affinity receptor for BDNF and NT-4/5, and also binds NT-3 with lower affinity. TrkB is widely expressed, primarily in nervous tissue. The biological effects of TrkB activation are crucial in neuronal differentiation during embryonic development, specifically in the formation of the sympathetic nervous system. Additionally, the TrkB/BDNF complex facilitates the survival of post-mitotic neurons, axon growth and guidance as well as synaptic plasticity. TrkB also contributes to learning and spatial memory formation and the attenuation of injury-induced neuronal cell death. In addition to regulating CNS physiology TrkB and BDNF are involved in the formation of follicular growth and oocyte survival in the mammalian ovary. TrkB is a heavily glycosylated type I transmembrane protein of 791 amino acids, and the TrkB-Fc Chimera contains 13 potential N-linked glycosylation sites.
Molecular Mass	TrkB-Fc Chimera migrates as a broad band between 90 and 115 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified TrkB-Fc Chimera that has a predicted molecular mass of 71.0kDa.

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PI	TrkB-Fc Chimera separates into a number of isoforms with a pI between 4.9 and 6.7 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified TrkB-Fc Chimera that has a predicted pI of 5.79.
% Carbohydrate	TrkB-Fc Chimera consists of 20-40% carbohydrate by weight.
Glycosylation	TrkB-Fc Chimera has N-linked and may have O-linked oligosaccharides.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.
Activity	TrkB-Fc Chimera bound to protein A sepharose beads is able to pull down its ligand, BDNF.

GENE INFORMATION

Gene Name	NTRK2 neurotrophic tyrosine kinase, receptor, type 2 [Homo sapiens]
Synonyms	neurotrophic tyrosine kinase, receptor, type 2; TRKB; GP145-TrkB; NTRK2; tyrosine kinase receptor B;BDNF/NT-3 growth factors receptor; EC 2.7.10.1; Trk-B; BDNF/NT-3 growth factors receptor; Neurotrophic tyrosine kinase receptor type 2; TrkB tyrosine kinase; OTTHUMP00000021573; OTTHUMP00000021574; OTTHUMP00000021576; OTTHUMP00000021577

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Gene ID	4915
mRNA Refseq	NM_001007097
Protein Refseq	NP_001007098
MIM	600456
UniProt ID	Q16620
Chromosome Location	9q22.1
Pathway	MAPK signaling pathway; Neurotrophin signaling pathway; Signalling by NGF
Function	ATP binding; neurotrophin receptor activity; nucleotide binding; protein binding; transferase activity; transmembrane receptor protein tyrosine kinase activity
PDB rendering based on 1hcf.	