

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse TrkC protein		
	Mouse TrkC (Cys32-Thr429) Accession # Q6VNS1	IEGRMDP	Mouse IgG _{2a} (Glu98-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Cys32		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	72 kDa		

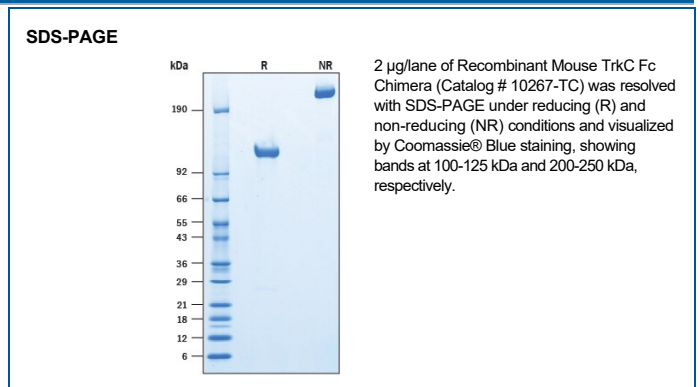
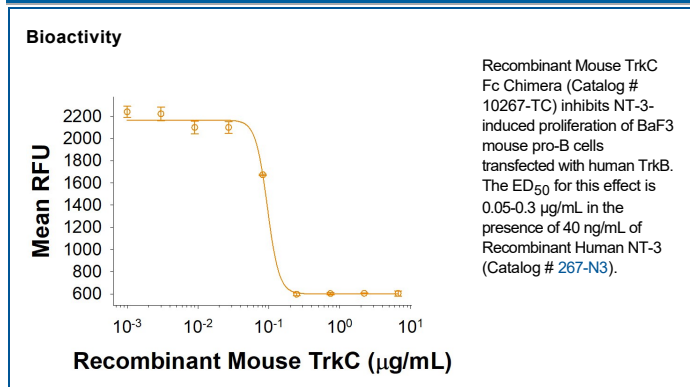
SPECIFICATIONS

SDS-PAGE	100-125 kDa, under reducing conditions
Activity	Measured by its ability to inhibit NT-3-induced proliferation of BaF3 mouse pro-B cells transfected with human TrkB. The ED ₅₀ for this effect is 0.05-0.3 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Tropomyocin receptor kinase C (TrkC), also named Neurotrophic tyrosine kinase receptor type 1 (NTRK3) is a member of a nerve growth factor tyrosine kinase receptor family. There are three members of the Trk family, TrkA, TrkB and TrkC, and they bind a group of structurally related, secreted proteins termed neurotrophins, which play an important role in the development and function of the nervous system. The Trk family shares a conserved structural motif consisting of two cysteine-rich domains, a cluster of three leucine-rich motifs, and two immunoglobulin-like domains in the extracellular region, a single transmembrane domain and an intracellular tyrosine kinase domain (3). Natural splice variants of the different Trks, lacking the first cysteine-rich domain, the first and second or all three of the leucine-rich motifs, or the tyrosine kinase domain, have been described (4). Mature mouse TrkC consists of a 398 amino acid (aa) extracellular domain (ECD) which shares 94 % and 100 % aa identity with human and rat TrkC, respectively. Each Trk family member exhibits different ligand specificities: TrkA binds NGF and NT-3, TrkB binds BDNF, NT-3 and NT-4/5, and TrkC only binds NT-3 (1, 2). The biological activities of the neurotrophins are mediated by binding to and activating two unrelated receptor types: the p75 neurotrophin receptor (p75NTR) and the Trk family of receptors (1, 2). P75NTR is a member of the tumor necrosis factor receptor superfamily (TNFRSF) and has been designated TNFRSF16. It binds all neurotrophins with low-affinity to transduce cellular signaling pathways that synergize or antagonize those activated by the Trk receptors. The primary location of TrkC expression is in the nervous system, specifically, in regions of the CNS. Low level TrkC expression has also been observed in a wide variety of tissues outside the nervous system (6). Trk receptor interactions with NGF play major roles in the development of the sympathetic nervous system and are essential for neuronal survival *in vivo* (8). Increased expression of TrkC has been associated with favorable survival in medulloblastoma patients (8) and inhibition of the Trk receptors may have a range of therapeutic implications (9).

References:

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5. Menn, B. *et al.* (1998) *J. Comp. Neurol.* **401**:47.
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