Recombinant Rat TrkA Fc Chimera

Catalog Number: 1056-TK

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Rat TrkA (Ala33 - Pro418) & (Ala34 - Pro418) Accession # P35739	IEGRMD	Human IgG_1 (Pro100 - Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ala33 & Ala34
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	69 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	120-130 kDa, reducing conditions
Activity	Measured by its ability to inhibit NGF-induced proliferation of TF-1 human erythroleukemic cells. The ED_{50} for this effect is 10-40 ng/mL in the presence of 10 ng/mL of rrNGF.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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.

BACKGROUND

Trk A, the product of the proto-oncogene *trk,* is a member of the neurotrophic tyrosine kinase receptor family that has three members. Trk A, Trk B and Trk C preferentially bind NGF, NT-4 and BDNF, and NT-3, respectively. All Trk family proteins share a conserved complex subdomain organization consisting of a signal peptide, two cysteine-rich domains, a cluster of three leucine-rich motifs, and two immunoglobulin-like domains in the extracellular region, as well as an intracellular region that contains the tyrosine kinase domain. Two distinct rat Trk A isoforms (TrkA-I and Trk-A-II) that differ by a 6-amino acid insertion in their extracellular domain have been identified. The longer Trk A isoform is the only isoform expressed within neuronal tissues whereas the shorter Trk A-I is expressed mainly in non-neuronal tissues. NGF binds to Trk A with low affinity and activates its cytoplasmic kinase, initiating a signaling cascade that mediates neuronal survival and differentiation. Higher affinity binding of NGF requires the coexpression of Trk A with the p75 NGF receptor (NGF R), a member of the tumor necrosis factor receptor superfamily. NGF R binds all neurotrophins with low affinity and modulates Trk activity as well as alters the specificity of Trk receptors for their ligands. NGF R can also mediate cell death when expressed independent of Trk.

References:

1. Esposito, D. *et al.* (2001) J. Biol. Chem. **276**:32687.
2. Sofroniew, M.V. *et al.* (2001) Annu. Rev. Neurosci. **24**:1217.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449