

DESCRIPTION

Source	<i>Spodoptera frugiperda</i> , Sf 21 (baculovirus)-derived			
	Human NGF R Lys29-Asn250 Accession # P08138	DIEGRMD	Human IgG ₁ (Pro100-Lys330)	6-His tag
	N-terminus		C-terminus	

N-terminal Sequence Lys29

Analysis

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 51 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	70-80 kDa, reducing conditions
Activity	Measured by its ability to inhibit β -NGF-dependent proliferation of TF-1 human erythroleukemic cells. Kitamura, T. <i>et al.</i> (1989) J. Cell Physiol. 140 :323. The ED ₅₀ for this effect is 0.2-0.6 μ g/mL.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 50 μ g/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
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. <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.

BACKGROUND

p75 neurotrophin receptor, also named low affinity NGF receptor (NGF R), is a type I transmembrane protein that belongs to the tumor necrosis factor receptor family. NGF R cDNA encodes a 427 amino acid (aa) residue precursor protein with a 28 aa residue signal peptide, a 222 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 155 aa residue intracellular domain. The extracellular region contains four cysteine-rich domains and binds NGF, BDNF, NT-3 and NT-4 approximately equally with low affinity. The cytoplasmic region contains a subtype 2 death domain.

NGF R expression has been shown to occur widely during development and in the adult. Expression has been detected in both neuronal and non-neuronal cells. NGF R was originally reported to function as a positive regulator of TrkA activity. NGF R has also been shown to signal by itself. Depending on its cellular environment, NGF R has now been shown to regulate cell migration, gene expression and to mediate apoptosis. Recombinant NGF R/Fc chimera binds NGF with high affinity and is a potent NGF antagonist. Naturally occurring truncated NGF R containing the extracellular domain and lacking the transmembrane or intracellular domain has been detected *in vivo* in urine, plasma and in amniotic fluid of humans and rats.

References:

1. Barker, P.A. and R.A. Murphy (1992) Molecular and Cellular Biochemistry **110**:1.
2. Bamji, A.X. *et al.* (1998) J. Cell Biol. **140**:911.
3. Feinstein, E. *et al.* (1995) Trends Biochem. Sci. **20**:342.