Mouse NGFR / P75 Protein (Fc Tag)

Catalog Number: **50971-M02H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

LNGFR; p75; p75NGFR; p75NTR; RP23-67E18.6; Tnfrsf16

Protein Construction:

A DNA sequence encoding the extracellular domain of mouse NGFR (Q9Z0W1) (Met 1-Asn 253) was fused with the Fc region of human IgG1 at the C-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit NGF-dependent proliferation of TF-1 human erythroleukemic cells. The ED_{50} for this effect is typically 0.5-3 μg/mL in the presence of 2 ng/mL Recombinant mouse NGF.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Lys 22

Molecular Mass:

The secreted recombinant mouse NGFR/Fc is a disulfide-linked homodimer. The reduced monomer comprises 463 amino acids and has a calculated molecular mass of 50.6 kDa. The apparent molecular mass of rmNGFR/Fc monomer is approximately 70-80 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

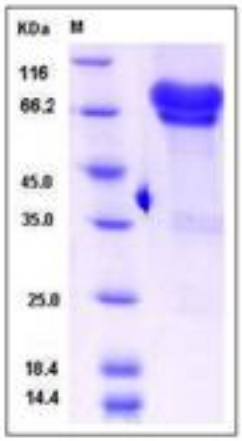
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Nerve growth factor receptors (NGFRs) belong to a large growth factor receptor family. NGFR includes two types of receptors: high-affinity nerve growth factor receptor and low-affinity nerve growth factor receptor. High-affinity nerve growth factor receptor is also referred as Trk familywhose members are bound by some neurotrophins with high affinity. binds with TrkA after being released from target cells, the NGF / TrkA complex is subsequently trafficked back to the cell body. The Low-affinity nerve growth factor receptor also named p75 which binds with all kinds of neurotrophins with low affinity. All the four kinds of neurotrophins, including Nerve growth factor, Brain derived neurotrophic factor, Neurotrophin-3, and Neurotrophin-4 bind to the p75. Studies have proved that NGFR acts as a molecular signal swith that determines cell death or survival by three steps. First, pro-nerve growth factor (prNGF) triggers cell apoptosis by its high affinity binding to p75NTR, while NGF induces neuronal survival with low-affinity binding. Second, p75NTR mediates cell death by combining with co-receptor sortilin, whereas it promotes neuronal survival through combination with proNGF. Third, release of the intracellular domain chopper or cleavage short p75 NTR can independently initiate neuronal apoptosis.

References

1.Chen LW, *et al.* (2008) The proNGF-p75NTR-sortilin signalling complex as new target for the therapeutic treatment of Parkinson's disease. CNS Neurol Disord Drug Targets. 7(6): 512-23. 2.Deponti D, *et al.* (2009) The low-affinity receptor for neurotrophins p75NTR plays a key role for satellite cell function in muscle repair acting via RhoA. Mol Biol Cell.20(16): 3620-7. 3.Ken-ichiro K, *et al.* (2004) Necdin-related MAGE proteins differentially interact with the E2F1 transcription factor and the p75 neurotrophin receptor. J Biol Chem. 279 (3): 1703-12.