NGFR Protein, Human (HEK293)

Cat. No.:	HY-P7271
Synonyms:	rHuNGFR; Gp80-LNGFR; p75 ICD; CD271; TNFRSF16
Species:	Human
Source:	HEK293
Accession:	P08138 (K29-N250)
Gene ID:	4804
Molecular Weight:	32-60 kDa

PROPERTIES

AA Sequence	K E A C P T G L Y T H S G E C C K A C N L G E G V A Q P C G A N Q T V C E P C L D S V T F S D V V S A T E P C K P C T E C V G L Q S M S A P C V E A D D A V C R C A Y G Y Y Q D E T T G R C E A C R V C E A G S G L V F S C Q D K Q N T V C E E C P D G T Y S D E A N H V D P C L P C T V C E D T E R Q L R E C T R W A D A E C E E I P G R W I T R S T P P E G S D S T A P S T Q E P E A P P E Q D L I A S T V A G V V T T V M G S S Q P V V T R G T T D N
Biological Activity	The ED_{50} is <0.4 μg/mL as measured by TF-1 cells.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Nerve Growth Factor Receptor (NGFR) is expressed not only in nervous tissue, but also in non-neuronal normal and cancer cells, such as perivascular cells, dental pulp cells, lymphoidal follicular dendritic cells, basal epithelium of oral mucosa and hair follicles, prostate basal cells and myoepithelial cells[1]. Human NGFR shares 92.45% aa sequence identity with mouse NGFR protein and 92.42% aa sequence identity with rat NGFR

protein.

Nerve Growth Factor Receptor (NGFR) is a type-I transmembrane protein, a typical structure of the TNFR superfamily and devoid of intrinsic catalytic activity. NGFR signaling involves activation of NF-kB (Rel/NF-kB transcription factors) and the phosphorylation of the transcription factor c-Jun kinase (JNK), as well as increased production of ceramide, leading to gene transcription or programmed cell death[2].

NGFR induces p53-dependent apoptosis and cell growth arrest as well as suppressed tumor growth[3]. The low-affinity nerve growth factor receptor (NGFR) p75NGFR induces apoptosis in the absence of nerve growth factor (NGF) binding but enhances neural survival when bound by NGF. NGFR enhances beta-amyloid peptide toxicity[4]. NGFR signal can induce the subsequent downregulation of melanoma antigens and eventually suppress CTL activation[5].

REFERENCES

[1]. Reis-Filho JS, et al. Distribution and significance of nerve growth factor receptor (NGFR/p75NTR) in normal, benign and malignant breast tissue. Mod Pathol. 2006 Feb;19(2):307-19.

[2]. Micera A, et al. Nerve growth factor and tissue repair remodeling: trkA(NGFR) and p75(NTR), two receptors one fate. Cytokine Growth Factor Rev. 2007 Jun-Aug;18(3-4):245-56.

[3]. Zhou X, et al. Nerve growth factor receptor negates the tumor suppressor p53 as a feedback regulator. Elife. 2016 Jun 10;5:e15099.

[4]. Rabizadeh S, et al. Expression of the low-affinity nerve growth factor receptor enhances beta-amyloid peptide toxicity. Proc Natl Acad Sci U S A. 1994 Oct 25;91(22):10703-6.

[5]. Furuta J, et al. CD271 on melanoma cell is an IFN-γ-inducible immunosuppressive factor that mediates downregulation of melanoma antigens. J Invest Dermatol. 2014 May;134(5):1369-1377.

[6]. Chung MK, et al. CD271 Confers an Invasive and Metastatic Phenotype of Head and Neck Squamous Cell Carcinoma through the Upregulation of Slug. Clin Cancer Res. 2018 Feb 1;24(3):674-683.

[7]. Chen C, et al. ESM1 mediates NGFR-induced invasion and metastasis in murine oral squamous cell carcinoma. Oncotarget. 2016 Oct 25;7(43):70738-70749.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA