

## 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

<b>AA Sequence</b>	<pre> 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           </pre>
<b>Biological Activity</b>	The ED <sub>50</sub> is <0.4 µg/mL as measured by TF-1 cells.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<0.2 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>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<sup>[1]</sup>.</p> <p>Human NGFR shares 92.45% aa sequence identity with mouse NGFR protein and 92.42% aa sequence identity with rat NGFR</p>
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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- $\kappa$ B (Rel/NF- $\kappa$ B 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<sup>[2]</sup>.

NGFR induces p53-dependent apoptosis and cell growth arrest as well as suppressed tumor growth<sup>[3]</sup>. The low-affinity nerve growth factor receptor (NGFR) p75<sup>NTR</sup> 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<sup>[4]</sup>. NGFR signal can induce the subsequent downregulation of melanoma antigens and eventually suppress CTL activation<sup>[5]</sup>.

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## REFERENCES

- [1]. Reis-Filho JS, et al. Distribution and significance of nerve growth factor receptor (NGFR/p75<sup>NTR</sup>) in normal, benign and malignant breast tissue. *Mod Pathol*. 2006 Feb;19(2):307-19.
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