

## Recombinant Human NGFR, 222aa, Fc Chimera

**Cat. No.** NGFR-453H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | Recombinant human Nerve growth factor receptor was fused to the Fc region of human IgG1 (aa 93-330). It was expressed in modified <i>human 293 cells</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | <p>Nerve growth factor receptor (NGFR), also known as p75NTR or CD271 antigen, is a low affinity NGF receptor primarily responsible for modulating the affinity and activity of tyrosine kinases that promote neuronal survival. Ligand binding by neurotrophins, including beta NGF, brain derived neurotrophic factor (BDNF), neurotrophin-3 (NT3) and neurotrophin-5 (NT4/5), to the NGF R can promote either survival or apoptosis of neurons. NGF receptors such as TrkA, B and C, can associate with NGF R to stimulate higher affinity ligand binding, although on its own NGF R binds to all neurotrophins within equal affinity. Neurotrophin-NGFR signaling mediates conditions such as pain, depression, obesity, nerve regeneration disorders, learning and memory. Additionally, NGF R is thought to play a role in neuronal death that occurs in disorders of the CNS such as Alzheimer's disease.</p> |
| <b>Molecular Mass</b>   | NGFR(222aa) - Fc Chimera migrates as a broad band between 75 and 100 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with unmodified NGFR(222aa) – Fc Chimera that has a predicted molecular mass of 50.8 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>pI</b>             | NGFR(222aa) - Fc Chimera separates into a number of isoforms with a pI between 4.0 and 6.0 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified NGFR(222aa) – Fc Chimera that has a predicted pI of 4.89. |
| <b>% Carbohydrate</b> | NGFR (222aa) - Fc Chimera consists of 30-50% carbohydrate by weight.                                                                                                                                                                                                    |
| <b>Glycosylation</b>  | NGFR (222aa) - Fc Chimera contains N-linked and O-linked oligosaccharides.                                                                                                                                                                                              |
| <b>Purity</b>         | >95%, as determined by SDS-PAGE and visualized by silver stain.                                                                                                                                                                                                         |
| <b>Formulation</b>    | When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.                                                                                                                               |
| <b>Reconstitution</b> | It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.                                                                                                                                                                                |
| <b>Storage</b>        | Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.                                                                                              |

## GENE INFORMATION

|                  |                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b> | NGFR nerve growth factor receptor (TNFR superfamily, member 16) [ Homo sapiens ]                                                                                                                                                                                                                                                                                |
| <b>Synonyms</b>  | nerve growth factor receptor (TNFR superfamily, member 16); CD271; p75NTR; TNFRSF16; p75(NTR); Gp80-LNGFR; NGFR; nerve growth factor receptor; low affinity nerve growth factor receptor; low-affinity nerve growth factor receptor; CD271 antigen; Low affinity neurotrophin receptor p75NTR; Low-affinity nerve growth factor receptor; NGF receptor; p75 ICD |
| <b>Gene ID</b>   | 4804                                                                                                                                                                                                                                                                                                                                                            |

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|----------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>mRNA Refseq</b>         | <a href="#">NM_002507</a>                                                                                                 |
| <b>Protein Refseq</b>      | <a href="#">NP_002498</a>                                                                                                 |
| <b>MIM</b>                 | <a href="#">162010</a>                                                                                                    |
| <b>UniProt ID</b>          | <a href="#">P08138</a>                                                                                                    |
| <b>Chromosome Location</b> | 17q21-q22                                                                                                                 |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction; Neurotrophin signaling pathway; Signalling by NGF                                 |
| <b>Function</b>            | catalytic activity; death receptor activity; nerve growth factor binding; neurotrophin receptor activity; protein binding |

**PDB rendering based on 1sg1.**

