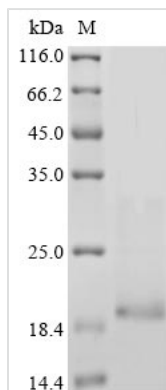




# Recombinant Human Neurotrophin-3 (NTF3)

<b>Product Code</b>	CSB-BP016120HU
<b>Abbreviation</b>	Recombinant Human NTF3 protein
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P20783
<b>Form</b>	Liquid or Lyophilized powder
<b>Storage Buffer</b>	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 85% as determined by SDS-PAGE.
<b>Sequence</b>	YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFY ETRCKEARPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRID TSCVCALSRKIGRT
<b>Research Area</b>	Neuroscience
<b>Source</b>	Baculovirus
<b>Target Names</b>	NTF3
<b>Expression Region</b>	139-257aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 10xHis-tagged and C-terminal Myc-tagged
<b>Mol. Weight</b>	17.5 kDa
<b>Protein Length</b>	Full Length of Mature Protein

## Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



## Description

Recombinant Human Neurotrophin-3 (NTF3) is expressed in a baculovirus system, spanning amino acids 139-257, which represents the full length of the mature protein. This product features dual tagging with an N-terminal 10xHis tag and a C-terminal Myc tag, making purification and detection more straightforward. The protein is purified to greater than 85% as determined by SDS-PAGE, ensuring a high-quality reagent suitable for research applications.

Neurotrophin-3 (NTF3) belongs to the neurotrophin family, which appears crucial for nervous system development and function. It likely plays a significant role in neuronal survival, development, and differentiation. NTF3 seems involved in key signaling pathways and represents a vital component in studies related to neural plasticity and neurodegenerative diseases.

## Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

### 1. In Vitro Neuronal Cell Culture Studies

This recombinant human NTF3 can help investigate neurotrophin signaling pathways in cultured neuronal cells, particularly those expressing TrkC receptors. The dual His and Myc tags make detection and quantification of protein binding to cell surfaces relatively easy, or for internalization studies using tag-specific antibodies. Researchers might examine dose-dependent responses in neuronal survival, differentiation, or neurite outgrowth assays by adding defined concentrations of this purified protein to cell culture media.

### 2. Protein-Protein Interaction Studies

The N-terminal His tag allows purification and immobilization of NTF3 for pull-down assays to identify potential binding partners or co-factors. Meanwhile, the C-terminal Myc tag provides an additional detection method for Western blot analysis or immunoprecipitation experiments. This dual-tagged format appears particularly useful for studying NTF3 interactions with receptor proteins, adaptor molecules, or other components of neurotrophin signaling complexes in biochemical assays.

### 3. Antibody Development and Validation

This recombinant NTF3 protein serves as a standardized antigen for developing and characterizing antibodies specific to human neurotrophin-3. The high purity level (>85%) should ensure reliable results in immunization protocols for monoclonal or polyclonal antibody production. The protein can also validate antibody specificity through ELISA, Western blot, or other immunoassays, with the Myc and His tags providing additional controls for experimental validation.



#### 4. Biochemical Characterization and Structural Studies

The purified recombinant protein enables detailed biochemical analysis of NTF3 properties, including protein stability, folding characteristics, and post-translational modifications when expressed in the baculovirus system. Researchers can perform biophysical studies such as dynamic light scattering, circular dichroism spectroscopy, or analytical ultracentrifugation to characterize the protein's oligomerization state and structural properties. The dual tags make protein tracking and quantification throughout various analytical procedures more manageable.

#### 5. Receptor Binding Assays

This NTF3 protein works well in competitive binding studies or direct binding assays with TrkC receptors or other potential neurotrophin receptors expressed in cell lines or membrane preparations. The His tag allows for easy purification and concentration determination. The Myc tag enables detection in binding assays using fluorescently labeled or enzyme-conjugated anti-Myc antibodies. Such studies may help determine binding kinetics, receptor specificity, and competitive interactions with other neurotrophins.

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#### Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

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#### Shelf Life

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