

ProNT-3, human recombinant protein
HDNF, Nerve growth factor 2, NGF-2, Neurotrophic factor
Catalog # PBV10203r

Specification

ProNT-3, human recombinant protein - Product info

Primary Accession [P20783](#)
Calculated MW **27.4 kDa KDa**

ProNT-3, human recombinant protein - Additional Info

Gene ID	4908
Gene Symbol	NTF3
Other Names	
Neurotrophin-3, NT-3, HDNF, Nerve growth factor 2, NGF-2, Neurotrophic factor	
Gene Source	Human
Source	E. coli
Assay&Purity	SDS-PAGE; ≥95%
Assay2&Purity2	HPLC; ≥95%
Recombinant	Yes
Sequence	Recombinant Human ProNT-3 is produced with E.coli expression system. Target protein is expressed with sequence (Asn19-Thr257) of Human (Uniprot #P20783).The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Asn-Met-Asp-Gln.

Target/Specificity
ProNT-3

Application Notes

Dissolve in 1x PBS (It is not recommended to reconstitute to a final concentration less than 100 µg/ml.). This can further be diluted to other aqueous buffers.

Format

Lyophilized protein

Storage

-20°C; Lyophilized from a 0.2 µm filtered solution of 20 mM PB and 250 mM NaCl, pH 7.2.

ProNT-3, human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ProNT-3, human recombinant protein - Images**ProNT-3, human recombinant protein - Background**

Proneurotrophin-3 (ProNT-3) is the precursor form of neurotrophin 3. ProNT3 functions via p75NTR and sortilin and induces neuronal apoptosis. On the contrary, mature NT3 interacts with Trk receptors and selectively promotes the survival, growth and differentiation of neurons. As axon retrograde transport is crucial for neurotrophin signaling, Pro-NT3 also plays an important role in the mechanism of retrograde signaling. ProNT3 interacts preferentially with the pan-neurotrophin receptor p75 (p75NTR) and vps10p domain-containing receptor sortilin and induces neuronal apoptosis, whereas mature BDNF selectively binds with high affinity to the TrkB kinase receptor and promotes the survival, growth and differentiation of neurons. As proneurotrophins and mature neurotrophins elicit opposite biological effects, Pro-BDNF cleavage in the neuronal system is regulated in a specific and cell-context dependent manner. Pro-NT3 plays an important role in retrograde signaling mechanism.

ProNT-3, human recombinant protein - References

Kaisho Y., et al. FEBS Lett. 266:187-191(1990).
Rosenthal A., et al. Neuron 4:767-773(1990).
Jones K.R., et al. Proc. Natl. Acad. Sci. U.S.A. 87:8060-8064(1990).
Maisonpierre P.C., et al. Genomics 10:558-568(1991).
Ota T., et al. Nat. Genet. 36:40-45(2004).