Datasheet

Cat. No. P1304

Recombinant Human Neurotrophin-4

Information

Gene ID	4909
Accession #	P34130
Alternate Names	Neurotrophin-5, NT-5
Source	Escherichia coli.
M.Wt	Approximately 28.1 kDa, a noncovalently linked homodimer of two 14.0 kDa polypeptide monomers (262 total amino acid residues).
AA Sequence	MGVSETAPAS RRGELAVCDA VSGWVTDRRT AVDLRGREVE VLGEVPAAGG SPLRQYFFET RCKADNAEEG GPGAGGGGCR GVDRRHWVSE CKAKQSYVRA LTADAQGRVG WRWIRIDTAC VCTLLSRTGR A
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 5.5.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by the dose-dependent induction of choline acetyl transferase activity in rat basal forebrain primary septal cell cultures is less than 50 ng/ml, corresponding to a specific activity of > 2.0 × 10 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10μg	100μg	500μg
Recombinant Human Neurotrophin-4	10μg	100μg	500μg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles
- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuNT-4 as determined by LAL method.

Description

NT-4 also named as NT-5 is a neuronal and epithelial grow factor belongs to the NGF-beta family. The NT-4 precursor is consisted of a 24 a.a. signal peptide, a 56 a.a. propertied and 130 a.a. NT-4. The mature protein has six Cys amino acid residues and has the relative structure with NT-3, BDNF (sharing about 48 % - 52 % sequence identity). Additionally, it shares 91 % and 95 % a.a. sequence identity with mouse and rat NT-4. NT-4 is mainly expressed in prostate and has low level thymus, placenta, and skeletal muscle. It can binding with the LNGFR and trkB receptors and plays a crucial role in the regulation of survival and the maintenance of peripheral sensory sympathetic neurons. Defect of NT-4 may cause primary open angle glaucoma type 1O.

Reference

1. Gao WQ, Zheng JL, Karihaloo M. 1995. J Neurosci, 15: 2656-67
2. Ogborn DIandGardiner PF. 2010. Muscle Nerve, 41: 385-91
3. Peinado-Ramon P, Salvador M, Villegas-Perez MP, et al. 1996. Invest Ophthalmol Vis Sci, 37: 489-500
4. Yuen ECandMobley WC. 1999. Exp Neurol, 159: 297-308
5. Sakuma K, Watanabe K, Sano M, et al. 2001. Brain Res, 907: 1-19.

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