RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Neurotrophin-3

Catalog No.	**Source**
228-11164	Escherichia Coli.

Synonyms

Neurotrophic factor, Nerve growth factor-2, NGF-2, HDNF, NT-3.

Introduction

NT3 a member of the neurotrophin family, that controls survival and differentiation of mammalian neurons. This protein is closely related to both nerve growth factor and brain-derived neurotrophic factor. It may be involved in the maintenance of the adult nervous system, and may affect development of neurons in the embryo when it is expressed in human placenta. NTF3-deficient mice generated by gene targeting display severe movement defects of the limbs. The mature peptide of this protein is identical in all mammals examined including human, pig, rat and mouse.

Description

Neurotrophin-3 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 119 amino acids and having a molecular mass of 13606.29 Dalton.
The NT-3 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated (1mg/ml) solution in water containing no additives.

Solubility

It is recommended to reconstitute the lyophilized Neurotrophin-3 in sterile 18MΩ-cm H_2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized NGF2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution NGF-2 should be stored at 4°C between 2-7 days and for future use below -18°C.
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Please prevent freeze-thaw cycles.

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Purity

Greater than 98.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Tyr-Ala-Glu-His-Lys.

Biological Activity

The ED_{50} as determined by the dose-dependant induction of choline acetyl transferase in rat basal forebrain primary septal culture was found between 20-50 ng/ml.

Protein content

Protein quantitation was carried out by two independent methods:
1. UV spectroscopy at 280 nm using the absorbency value of 2.165 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of NT-3 as a Reference Standard.