



Neuregulin-1 beta2 / Heregulin-b2, human recombinant (rHuNRG1)

Catalog No: 94966
Lot No: XXXXX
Source: *E. coli*
Synonyms: Neuregulin-1, NRG1, GGF, HGL, HRGA, NDF, SMDF, HRG, ARIA, GGF2, HRG1

Background

Neuregulin is a signaling protein for ErbB2/ErbB4 receptor heterodimers on the cardiac muscle cells, playing an important role in heart structure and function through inducing ErbB2/ErbB4 receptor phosphorylation and cardiomyocyte differentiation. Research on molecular level discovered that neuregulin recombinant could make disturbed myocardial cell structure into order and strengthen the connection between myocardial cells by intercalated discs re-organization. Pharmacodynamic experiments in animals showed that neuregulin (NRG1) recombinant can reduce the degree of damage on myocardial cells caused by ischemia, hypoxia and viral infection.

Description

Neuregulin-1 beta 2 human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 61 amino acids and having a total molecular mass of 7.0 kDa. NRG-1 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized NRG1 in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized NRG1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Heregulin should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 96.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

SHLVKCAEKE KTFVCVNGGEC FMVKDLSNPS RYLCKCPNEF TGDRCQNYVM ASFYKAEELY Q

Activity

The ED₅₀ as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 50 ng/ml, corresponding to a specific activity of > 2.0 × 10⁴ IU/mg.

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