Data Sheet (Cat.No.TMPS-00048)

TargetMol

NRG1 beta 1 Protein, Human, Recombinant (CHO)

General Information

Synonyms: neuregulin;NRG1-beta 1;Heregulin beta-1

Protein Construction: Thr176-Lys246

Species: Human

Expression Host: CHO Cells

Accession: Q02297-6

Molecular Weight: ~7.5 kDa (Reducing conditions)

QC Testing

Biological Activity: ED 50 ≤ 0.5 ng/ml, determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells.

Purity: > 95% as determined by SDS-PAGE

Endotoxin: < 0.2 EU/μg of protein as determined by the LAL method.

Formulation: Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Neuregulins or neuroregulins are a family of four structurally related proteins (NRG1, NRG2, NRG3 and NRG4) that are members of the EGF family of proteins. Studies indicate neuregulins function in nervous system development with essential roles in vertebrate embryogenesis including: cardiac development, Schwann cell and oligodendrocyte differentiation, certain aspects of neuronal development, and the formation of neuromuscular synapses. Neuregulin 1 is essential for the normal development of the nervous system and the heart. It is produced in numerous isoforms by alternative splicing, allowing it to perform a variety of functions. All NRG1 isoforms contain an EGF-like domain that is required for direct binding to ErbB3 or ErbB4 receptor tyrosine kinases.

The transmembrane NRG1 isoforms contain an extracellular domain that can be proteolytically cleaved to release soluble growth factors.

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