

Recombinant Human Neuregulin 1-beta2 EGF-like domain GMP

Information

Gene ID	
Accession #	
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 7.0 kDa, a single non-glycosylated polypeptide chain containing 61 amino acids.
AA Sequence	SHLVKCAEKE KTFCVNGGEC FMVKDLSNPS RYLCKCPNEF TGDRQCQNYVM ASFYKAEELY Q
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - A minimum of 12 months when stored at $\leq -20^{\circ}\text{C}$ as supplied Refer to lot specific COA for the Use by Date - 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 $0.2\ \mu\text{m}$ filtered solution in PBS, pH 7.4.
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 $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 5 ng/ml, corresponding to a specific activity of $> 2.0 \times \text{U/mg}$.
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	5 μg	100 μg	
Recombinant Human Neuregulin 1-beta2 EGF-like domain GMP	5 μg	100 μg	

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- 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	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than $0.01\text{ EU}/\mu\text{g}$ of rHuNRG1- $\beta 2$ GMP as determined by LAL method.

Description

Neuregulin 1 belongs to a family of structurally related polypeptide growth factors and is produced in numerous isoforms by alternative splicing, which allows it to perform a wide variety of functions. These isoforms include heregulins (HRGs), glial growth factors (GGFs) and sensory and motor neuron-derived factor (SMDF). They all have the Ig and EGF-like domain, and can bind to ErbB3 and ErbB4 receptor tyrosin kinases. This binding induces ErbB3 and ErbB4 heterodimerization with ErbB2, stimulating intrinsic kinase activity, which leads to tyrosine phosphorylation. NRG1 isoforms have functions of inducing the growth and differentiation of epithelial, neuronal, glial, and other types of cells.

Reference

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