Datasheet

Cat. No. P1152

Recombinant Human NRG1-beta2

Information

Gene ID	3084
Accession #	Q02297
Alternate Names	Heregulin-beta1, HRG1
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 TGDRCQNYVM ASFYKAEELY Q
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 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 ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} 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 > 2.0×10^5 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	10 μg	100 μg	500 μg
Recombinant Human NRG1-beta2	10 μg	100 μg	500 μg

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Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuNRG1-β2 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

1. Shamir A, Kwon OB, Karavanova I, et al. 2012. J Neurosci, 32: 2988-97.

2. Malek RL, Toman RE, Edsall LC, et al. 2001. J Biol Chem, 276: 5692-9.

3. Zhang Z, Prentiss L, Heitzman D, et al. 2006. J Neurosci Res, 84: 1-12.

4. Law AJ, Shannon Weickert C, Hyde TM, et al. 2004. Neuroscience, 127: 125-36.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com