

DATASHEET
Version 20181206

Heregulin β -1, Human

Cat. No.: Z03321-10**Size:** 10.0 ug**Synonyms:** Heregulin beta-1; NRG1-beta 1;neuregulin**Description:**

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.

Recombinant Human Heregulin β -1 produced in CHO cells is a polypeptide chain containing 65 amino acids. A fully biologically active molecule, rhHeregulin β -1 has a molecular mass of 7.5 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

00001 SHLVKCAEKE KTFVNGGEC FMVKDLNPS RYLCKCPNEF
00041 TGDRCQNYVM ASFYKHLGIE FMEAE

Source: CHO

Biological Activity: ED₅₀ < 100pg/ml, determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells, corresponding to a specific activity of $\geq 1 \times 10^7$ units/mg.

Molecular Weight: 7.5 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 μ m filtered solution in PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant Human Heregulin β -1 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human Heregulin β -1 should be stable 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.