Heregulin-β1 (EGF Domain), human recombinant, expressed in E. coli

Catalog Number H7660
Storage Temperature –20 °C

Synonym: HRG-β1

Product Description
Recombinant human Heregulin-β1 (EGF Domain) is produced from a DNA sequence encoding the EGF domain of heregulin-β1.1 The 65 amino acid peptide has a predicted molecular mass of ~7.5 kDa.

HRGs bind directly to the receptors erbB-3 and erbB-4, and apparently activate erbB-2 only indirectly as a result of receptor heterodimerization. HRG-α binding to each of these two receptors is reported to be ~100-fold weaker than HRG-β. When erbB-2 is combined into a heterodimer with erbB-3 or erbB-4, the binding affinities of both α and β isoforms are substantially improved.

HRGs are mitogenic for Schwann cells, various epithelial cells, and a number of tumor cell lines. HRGs inhibit proliferation and induce the differentiation of tumor cells such as mammary, ovarian, lung, and gastric cells that are arrested at the G2/M phase. They also have been found to induce expression of acetylcholine receptors and possibly other molecules in muscle cells at newly formed neuromuscular synapses, suggesting a possible role in neuromuscular synapse maturation and maintenance.

Activity of recombinant human Heregulin-β1 (EGF Domain) is measured by its ability to stimulate the proliferation of human MCF-7 cells grown under serum-free conditions.5 The ED50 is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell-based bioassay.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
Reconstitute the contents of the vial with water to a concentration of 0.1 mg/ml. The solution can then be diluted into other aqueous buffers and stored at –20 °C.

Storage/Stability
Store the product at –20 °C. The lyophilized product may be stored at 2–8 °C for up to 4 weeks without noticeable loss of activity. Stock solutions should be stored in working aliquots at –20 °C. Avoid repeated freeze-thaw cycles. Do not store in a frost-free freezer.

References