



Product Information

Heregulin- α , EGF Domain

Human, Recombinant
Expressed in *E. coli*

Product No. **H 5529**

Product Description

Heregulin- α is produced from a DNA sequence encoding the EGF domain of heregulin α (HRG), amino acid residues 177-241.¹ The 65 amino acid residue protein has a molecular weight is approximately 7 kDa.

Heregulin- α (HRG1- α , NRG1- α) and its rat homologue neu differentiation factor (NDF) were initially isolated as specific activators of the 185 kDa transmembrane tyrosine kinase encoded by the erbB2/HER-2/neu proto-oncogene.² Several DNA clones encoding multiple isoforms of HRG comprise the neuregulin family of cytokines. The neuregulin family members contain an EGF-like structural domain and also an IgD domain. HRG binds directly to erbB-3 and erbB-4, but not to erbB-2. As a result of receptor heterodimerization, HRGs activate erbB-2 indirectly. Heregulin- α is mitogenic for Schwann cells and epithelial cells³ and inhibits the proliferation of tumor cells.⁴

Reagent

Lyophilized from a 0.2 μ m-filtered solution in phosphate buffered saline containing 2.5 mg bovine serum albumin.

Reconstitution and Use

Reconstitute the contents of the vial using 0.2 μ m-filtered phosphate buffered saline containing 0.1% bovine serum albumin to a concentration of no less than 50 μ g/ml.

Storage

Prior to reconstitution, store at -20°C . Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored at -20°C to -70°C . For prolonged storage, freeze in working aliquots. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile

The biological activity is measured by its ability to stimulate the proliferation of human MCF-7 cells grown under serum-free conditions.⁵

Endotoxin: ≤ 1.0 EU (endotoxin unit) per 1 μ g of the cytokine as determined by the LAL method.

References

1. Holmes, W.E., et al., *Science*, **256**, 1205 (1992).
2. Schechter, A., et al., *Nature*, **312**, 51 (1984.)
3. Marchionni, M., et al., *Nature*, **362**, 312 (1993).
4. Prigent, S., et al., *Prog. Growth Factor Res.*, **4**, 1 (1992).
5. Karey, K.P., et al., *Cancer Research*, **48**, 4083 (1988).

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