

Product Information

β-Endothelial Cell Growth Factor, human recombinant, expressed in *E. coli*

Catalog Number **E1388**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 105843-51-4
Synonyms: β-ECGF; ECGS

Product Description

Recombinant, human β-Endothelial Cell Growth Factor (β-ECGF) is a 14 amino acid N-terminal extension of acidic fibroblast growth factor.¹ It is expressed in *Escherichia coli*. The 154 amino acid recombinant protein, generated after removal of the initiation methionine, has a predicted molecular mass of ~17 kDa.

Two forms of ECGF were originally purified from bovine brain and termed α and β-ECGF.² β-ECGF is a member of a family of anionic endothelial cell polypeptide mitogens that includes acidic fibroblast growth factor and eye-derived growth factor II.³ It has been postulated that both α-ECGF and acidic fibroblast growth factor (aFGF) may be derived from a common precursor, β-ECGF. Recombinant, human β-ECGF is prepared from a DNA sequence encoding the 155 amino acid residue of human β-ECGF.⁴ β-ECGF is a potent endothelial cell mitogen and its mitogenic activity is potentiated by heparin. β-ECGF stimulates the growth of quiescent HUVEC cells in culture.⁵

The product is lyophilized from a 0.2 μm filtered solution of 10 mM MOPS, pH 7.2, 50 mM ammonium sulfate, 0.2 mM DTT, and 0.2 mM EDTA containing 50 μg bovine serum albumin per 1 μg cytokine.

ED₅₀: 0.03-0.3 ng/ml (in the presence of 10 μg/ml of heparin)

The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay. β-ECGF is measured by its ability to stimulate ³H-thymidine incorporation in quiescent NR6R-3T3 fibroblasts.⁶

Purity: ≥97% (SDS-PAGE and visualized by silver stain)

Endotoxin: ≤0.1 ng/μg of the cytokine (LAL method)

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 using 0.2 μm filtered phosphate buffered saline (PBS) containing 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of not less than 1 μg/ml.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a “frost-free” freezer.

References

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2. Burgess, W. et al., J. Biol. Chem., **260**, 11389 (1985).
3. Schreiber, A. et al., J. Cell. Biol., **101**, 1623 (1985).
4. Jaye, M. et al., Science, **233**, 541 (1986).
5. Maciag, T. et al., J. Biol. Chem., **257**, 10, 5333 (1982).
6. Thomas, K., Meth. in Enzymol., **147**, 120 (1987).

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