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Product Information

Heparin-Binding EGF-Like Growth Factor human, recombinant expressed in Sf21 cells

Product Number **E4643**
Storage Temperature -20°C

Synonym: HB-EGF

Product Description

Heparin-Binding Epidermal Growth Factor-like Growth Factor (HB-EGF) was originally purified from the conditioned medium of human U-937 histocytic lymphoma cells based on its ability to bind heparin. HB-EGF is a member of the EGF family and accordingly, has been called heparin binding EGF-like growth factor.¹

Purified HB-EGF is mitogenic for BALB-3T3 cells and is a very potent mitogen for smooth muscle cells. HB-EGF is mitogenic for keratinocytes. The HB-EGF gene is expressed by U-937 cells and cultured human macrophages. HB-EGF inhibits 100% of the binding of ^{125}I EGF to A-431 cells and smooth muscle cells indicating HB-EGF binds to EGF receptors.¹

This product is produced in the insect cell line *Spodoptera frugiperda* 21 by infection with a recombinant baculovirus that contains the DNA sequence which encodes the first 148 amino acids of the human HB-EGF precursor.¹ An 86-amino acid form of the mature recombinant protein is produced after removal of the 62-amino acid signal and pro-peptide.

Molecular Weight: 9.5 kDa

HB-EGF is lyophilized from a $0.2\text{ }\mu\text{m}$ -filtered solution of phosphate buffered saline (PBS), pH 7.4, and contains 2.5 mg bovine serum albumin as a carrier protein.

The biological activity of HB-EGF-like Growth Factor is tested in culture by measuring its ability to stimulate ^3H -thymidine incorporation in EGF-responsive BALB/c-3T3 cells. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Preparation Instructions

Reconstitute the contents of the vial using $0.2\text{ }\mu\text{m}$ -filtered PBS containing 0.1% BSA to a concentration not less than $1\text{ }\mu\text{g/ml}$.

Storage/Stability

Prior to reconstitution, store at -20°C . After reconstitution, store at $2-8^{\circ}\text{C}$ for a maximum of 3 months. For extended storage, freeze in working aliquots at -70°C or -20°C . Repeated freezing and thawing is not recommended.

References

1. Higashiyama, S., *et al.*, Science, **251**, 936 (1991).

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