

Human HBEGF / DTR Protein

Catalog Number: 10325-HNAB



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

HBEGF, DTR, DTS, DTSF, HEGFL

Protein Construction:

A DNA sequence encoding the human HBEGF (Q99075) (Met 1-Leu 148) without the C-terminal propeptide (aa 149-208), was expressed and purified.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to stimulate proliferation in an EGF-responsive mouse fibroblast cell line, Balb/3T3. The ED50 for this effect is typically 0.15-0.75 ng/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Asp 63

Molecular Mass:

The expressed pro form of human HBEGF consists of 148 amino acids and predicts a molecular mass of 16.4 kDa. The processed soluble HBEGF is a 9.7 kDa protein comprising 86 amino acids generated by proteolytic processing.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

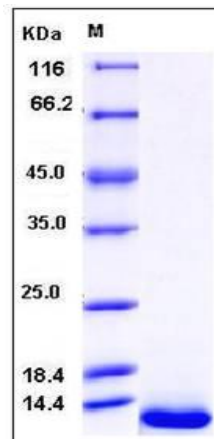
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Heparin-binding EGF-like growth factor, also known as HBEGF, Diphtheria toxin receptor and DTR, is a secreted protein which is released into the extracellular space and probably binds to a receptor. Proheparin-binding EGF-like growth factor is a single-pass type I membrane protein. HBEGF contains one EGF-like domain. HBEGF may be involved in macrophage-mediated cellular proliferation. It is mitogenic for fibroblasts and smooth muscle but not endothelial cells. HBEGF is able to bind EGF receptors with higher affinity than EGF itself and is a far more potent mitogen for smooth muscle cells than EGF. HBEGF also acts as a diphtheria toxin receptor. HBEGF induces trophoblast extravillous differentiation and prevents apoptosis. These functions are compromised in preeclampsia. HBEGF-mediated signaling significantly reduces trophoblast cell death at term and its deficiency in preeclampsia could negatively impact trophoblast survival.

References

1. Higashiyama S. et al., 1991, Science. 251: 936-939.
2. Mitamura T. et al., 1995, J Biol Chem. 270: 1015-9.
3. Louie GV. et al., 1997, Mol Cell. 1: 67-78.
4. Imudia AN. et al., 2008, Placenta. 29 (9): 784-9.
5. Jessmon P. et al., 2009, Mol Reprod Dev. 76 (12): 1116-27.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>