



Amphiregulin, human recombinant

Catalog No: 97403
Lot No: XXXXX
Source: *E. coli*
Synonyms: Schwannoma-derived growth factor, Colorectum cell-derived growth factor, AR, CRDGF, SDGF, AREGB, MGC13647

Background

Amphiregulin (AREG) belongs to the EGF family of cytokines that contain 10 proteins such as EGF, TGF β , HBEGF, and the various heregulins. These cytokines are synthesized as transmembrane precursors and are categorized by the presence of one or several EGF structural units in their extracellular domain. The soluble forms of these cytokines are released by proteolytic cleavage. Initially, Amphiregulin (AREG) was isolated from the conditioned media of a PMA treated MCF 7 human breast carcinoma cell line. Multiple forms of native AR containing either 78 or 84 amino acid residues and both N and O-linked oligosaccharides have been found. Amphiregulin (AREG) mRNA expression can be identified in several carcinoma cell lines and the epithelial cells of numerous human tissues such as colon, stomach, breast, ovary, kidney, etc.

Description

Amphiregulin (AREG) human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 98 amino acids and having a molecular mass of 11.3 kDa. AREG is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized AREG in sterile 18 M Ω -cm H $_2$ O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized AREG, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution AREG should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

SVRVEQVVKP PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF QNFCIHGECK YIEHLEAVTC KCQQEYFGER
CGEKSMKTHS MIDSSLK

Activity

Determined by its ability to stimulate the proliferation of mouse Balb/c 3T3 cells. The expected ED50 for this effect is 5 - 10 ng/ml, corresponding to a specific activity of 100,000 - 200,000 units/mg.

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Usage

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