

## Recombinant Human Amphiregulin (rh AREG)

**Synonyms:** Schwannoma-derived growth factor, Colorectum cell-derived growth factor, AR, CRDGF, SDGF, MGC13647.

**Introduction:** Amphiregulin belongs to the EGF family of cytokines that contain 10 proteins such as EGF, TGF $\beta$ , 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 was isolated from the conditioned media of a PMA treated MCF 7 human breast carcinoma cell line. Multiple forms of native Amphiregulin containing either 78 or 84 amino acid residues and both N and O-linked oligosaccharides have been found. Amphiregulin 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:** Human recombinant AREG produced in E.coli is a single, non-glycosylated, polypeptide chain containing 98 amino acids and having a molecular mass of 11.3 kDa. The AREG is purified by proprietary chromatographic techniques.

**Source:** *Escherichia coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH7.4. The samples of 1 $\mu$ g contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized AREG in sterile H<sub>2</sub>O not less than 100 $\mu$ 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 HPLC and SDS-PAGE.

**Amino Acid Sequence:** SVRVEQVVKP PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF QNFCIHGECK YIEHLEAVTC KCQQEYFGER CGEKSMKTHS MIDSSLSK

**Biological Activity:** Determined by its ability to stimulate the proliferation of mouse Balb/c 3T3 cells. The expected ED<sub>50</sub> for this effect is 5-10 ng/ml, corresponding to a specific activity of 100,000-200,000units/mg.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	10 $\mu$ g	Cat.N°	11344803
<i>medium</i>	50 $\mu$ g	Cat.N°	11344805

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