

Recombinant Human Amphiregulin

Information

Gene ID	374
Accession #	P15514
Alternate Names	AR, AREG, Colorectum Cell-derived Growth Factor, CRDGF
Source	Escherichia coli.
M.Wt	Approximately 11.3 kDa, a single non-glycosylated polypeptide chain containing 98 amino acid residues.
AA Sequence	SVRVEQVVKP PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF QNFCIHGECK YIEHLEAVTC KCQQEYFGER CGEKSMKTHS MIDSSLSK
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using murine Balb/c 3T3 cells is between 5-10 ng/ml.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Amphiregulin	10µg	100µg	500µg

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuAmphiregulin as determined by LAL method.

Description

Amphiregulin is an EGF related growth factor and was originally isolated from the conditioned media of a PMA-treated MCF-7 human breast carcinoma cell line. It is mainly expressed numerous carcinoma cell lines and the epithelial cells of various human tissues including colon, stomach, breast, ovary, kidney, etc. Synthesized as a transmembrane protein, Amphiregulin's extracellular domain is proteolytically processed to release the mature protein. There are 6 conserved cysteine residues, which form 3 intramolecular disulfide bonds essential for biological activity. Amphiregulin signals through the EGF/TGF-α receptor, and stimulates growth of keratinocytes, epithelial cells and some fibroblasts. It also inhibits the growth of certain carcinoma cell lines. Mutations in this encoded protein are associated with a psoriasis-like skin phenotype.

Reference

1. Giusti C, Desruisseau S, Ma L, et al. 2003. Int J Cancer, 105: 769-78
2. Solic NandDavies DE. 1997. Exp Cell Res, 234: 465-76
3. Michalopoulos GKandKhan Z. 2005. Gastroenterology, 128: 503-6
4. Eckstein N, Servan K, Girard L, et al. 2008. J Biol Chem, 283: 739-50
5. Higginbotham JN, Demory Beckler M, Gephart JD, et al. 2011. Curr Biol, 21: 779-86.

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