

Cytokines

Human Recombinant Amphiregulin

Amphiregulin



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

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Catalog # 78104
78104.1

10 µg
50 µg

Product Description

Amphiregulin is a member of the epidermal growth factor (EGF) family. It binds to several receptors including EGFR/ErbB1, HER2/ErbB2, HER3/ErbB3, and HER4/ErbB4, which activates Ras/Raf/MAPK and PI3K/AKT pathways. This results in cell proliferation, apoptosis resistance, and invasive behaviour (Normanno et al.). The expression of amphiregulin is induced by tissue injury and inflammation. Amphiregulin promotes mammary development, trophoblast growth, lung and kidney branching morphogenesis, and keratinocyte proliferation. It stimulates the growth of most cell types, including normal and transformed mammary epithelial cells, and malignant cells of the colon, prostate, cervix, and pancreas (Berasain & Avila).

Product Information

Alternative Names: AR, AREG, AREGB, Colorectum cell-derived growth factor, CRDGF, MGC13647, Schwannoma-derived growth factor, SDGF

Accession Number: Q5U026

Amino Acid Sequence: SVRVEQVVKP PQNKTESNT SDKPKRKKKKG GKNKGKNNRRNR KKKNPCNAEF QNFCIHGECK YIEHLEAVTC KCQEQYFGER CGEKSMKTHS MIDSSLK

Predicted Molecular Mass: 11.3 kDa

Species: Human

Cross Reactivity: Not determined

Formulation: Lyophilized after dialysis against phosphate-buffered saline.

Source: HEK293

Specifications

Activity: The specific activity is $\geq 5.0 \times 10^6$ units/mg ($EC_{50} \leq 0.2$ ng/mL) as determined by a cell proliferation assay of BALB/c 3T3 cells.

Purity: $\geq 95\%$

Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

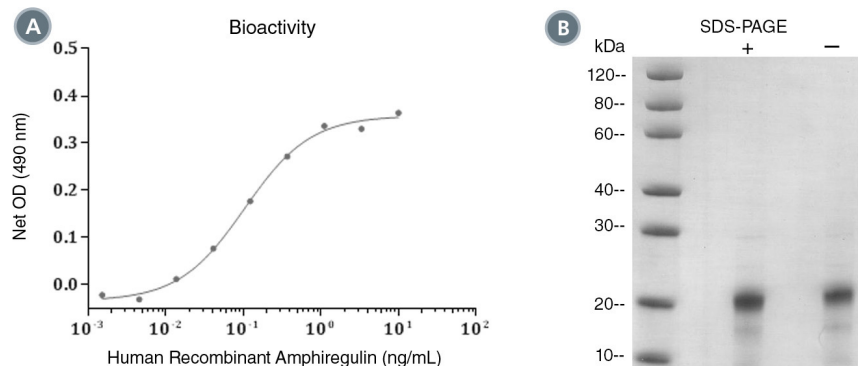
Preparation and Storage

Storage: Store at -80°C.

Stability: Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 week or at -20°C to -80°C for up to 2 months. Avoid repeated freeze-thaw cycles.
NOTE: If reconstituted product will be used immediately BSA is not required.

Data



(A) The biological activity of Human Recombinant Amphiregulin was tested by its ability to promote the proliferation of BALB/c 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is less than 0.2 ng/mL.

(B) 2 µg of Human Recombinant Amphiregulin was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Berasain C & Avila MA. (2014) Amphiregulin. *Semin Cell Dev Biol* 28: 31–41.
Normanno N et al. (2006) Epidermal growth factor receptor (EGFR) signaling in cancer. *Gene* 366(1): 2–16.
Wiley HS. (2003) Trafficking of the ErbB receptors and its influence on signaling. *Exp Cell Res* 284(1): 78–88.

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