

Cytokines

Human Recombinant Amphiregulin

Amphiregulin

Catalog # 78104
78104.1

10 µg
50 µg



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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 PQNKTESENT SDKPKRKKKG GKNGKNRRNR KKKNPCNAEF QNFCIHGECK YIEHLEAVTC KCQQEYFGER 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

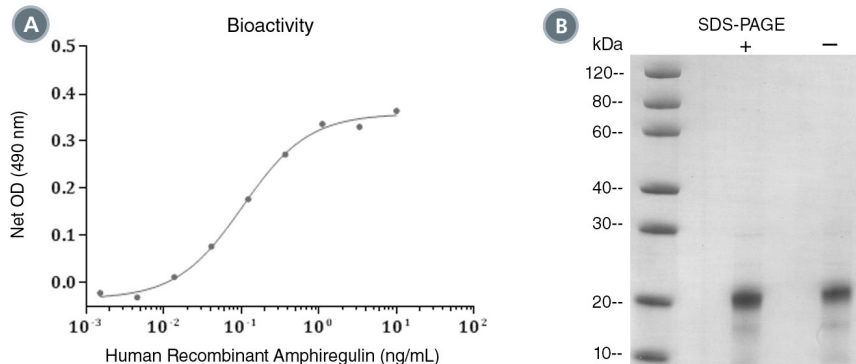
Activity: The specific activity is $\geq 5.0 \times 10^6$ units/mg ($EC_{50} \leq 0.2$ ng/mL) as determined by a cell proliferation assay using BALB/c 3T3 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage: Store at -80°C .
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at $2 - 8^\circ\text{C}$ for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

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. Human Recombinant Amphiregulin has a predicted molecular mass of 11.3 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit 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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