**Product Description**

Epidermal growth factor (EGF) is the founding member of the EGF family of proteins and is characterized by high-affinity binding to various EGF receptors (EGFRs) and the production of mitogenic responses (Carpenter & Cohen). EGF promotes EGFR dimerization, resulting in activation of downstream pathways including PI3K, ERK1/2, JAK/STAT, β-catenin, and calcium signaling. EGF is secreted by the gut-associated salivary and Brunner’s glands, is found in a variety of body fluids, and stimulates cell proliferation and differentiation in rodent and neonatal human intestine (Wright et al.). EGF can stimulate the proliferation of mouse embryonic stem cells or induce the terminal differentiation/growth inhibition of A431 cells (Heo et al.).

**Product Information**

- **Alternative Names:** Beta-urogastrone, HOMG4, Pro-epidermal growth factor, Pro-epidermal growth factor precursor, URG, Urogastrone
- **Accession Number:** P01132
- **Amino Acid Sequence:** MNSYPGCPSS YDGYCLNGGVC MHIESLDSY TCNCVIGYS GDRCQTRYLW WELR
- **Predicted Molecular Mass:** 6.2 kDa
- **Species:** Mouse
- **Cross Reactivity:** Human, Rat
- **Formulation:** Lyophilized after dialysis against phosphate-buffered saline.
- **Source:** E. coli

**Specifications**

- **Activity:** The specific activity is ≥ 1 x 10^7 units/mg (EC50 ≤ 0.1 ng/mL) as determined by a cell proliferation assay using BALB/c 3T3 cells.
- **Purity:** ≥ 95%
- **Endotoxin Level:** Measured by kinetic Limulus amebocyte 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. As a general guide, do not store at 2 - 8°C for more than 2 weeks or at -20°C for more than 3 months. Avoid repeated freeze-thaw cycles.
Data

(A) The biological activity of Mouse Recombinant EGF 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 0.1 ng/mL.

(B) 5 μg of Mouse Recombinant EGF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant EGF has a predicted molecular mass of 6.2 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