Bio Academia
Manufacturer

AS ONE

Human Epidermal Growth Factor (EGF)

03-001 50 µg # 03-001-5 5 x 50 µg

EGF is a polypeptide growth hormone which plays an important role in the regulation of growth, proliferation, and differentiation of a wide range of cells by binding to its receptor EGFR (epidermal growth factor receptor). Through its binding to cell surface receptors, EGF activates an extensive network of signal transduction pathways that include activation of the PI3K/AKT, RAS/ERK and JAK/STAT pathways. The full-length human EGF was expressed in *E. coli* and highly purified by the propriety chromatographic procedures. This product has the same amino acid sequence as the mature human EGF (6.35 kDa) and has no tag attached.

Applications

1. EGF is commonly used as a supplement in serum-free or reduced serum media for culture of mammalian cells.
2. Studies of the human EGF receptor, transmembrane signaling and protein phosphorylation
3. Western blot control for anti-EGF antibodies
4. Acceleration of the healing process of epidermis damage on skin, cornea, etc.
5. Widely used in cosmetics, such as whitening, anti-wrinkle, anti-aging, etc.

Specification

Activity: The ED50 as determined by a cell proliferation assay using MTS assay kit (CellTiter 96 AQueous Assay, Promega) with NHEK cells (normal human epidermal keratinocytes) was < 0.1 ng/ml, corresponding to a specific activity of < 1 x 10^7 units/mg.

Purity: >95% as determined by SDS-PAGE (CBB staining)

Form: 1.0 mg/ml in 10mM Na-phosphate (pH7.2), 50% glycerol, filter-sterilized

Storage: -20°C or for long-term storage -70°C

Data Link: Gene ID: 1950, Gene Sequence: AY548762, Amino Acid Sequence: AAS83395

References

1. Carpenter G & Cohen S (1990) “Epidermal growth factor.” *J Biol Chem* **265**:7709-7712 PMID: 2186024
2. Cohen S, Carpenter G (1975) “Human epidermal growth factor: Isolation and chemical and biological properties.” *Proc Natl Acad Sci USA* **72**: 1317-1321 PMID: 1055407

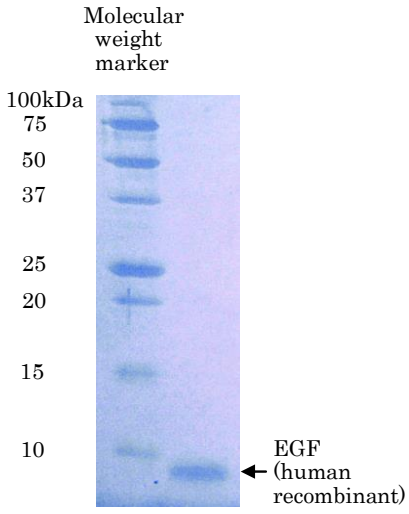

Fig. 1: SDS-PAGE of human EGF