APA560Hu63 100μg
Active Epidermal Growth Factor (EGF)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Asn971~Arg1023
Tags: C-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.5
Predicted Molecular Mass: 7.8kDa
Accurate Molecular Mass: 8kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the

protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

NSDSECPLSH DGYCLHDGVC MYIEALDKYA CNCVVGYIGE RCQYRDLKWW ELR

[ACTIVITY]

Epidermal Growth Factor (EGF) is a core member of the EGF superfamily of peptide growth factors, a conserved family with EGF-like structural domains. As a potent mitogen, EGF exerts pivotal biological functions by binding to its transmembrane receptor EGFR (ErbB1) and triggering downstream signaling cascades like Ras-MAPK and PI3K-Akt. It robustly promotes the proliferation of epithelial, mesenchymal and neural cells, accelerates cell migration and tissue regeneration, and modulates cell differentiation. Notably, EGF does not induce apoptosis; instead, it suppresses apoptotic pathways to enhance cell survival, playing indispensable roles in embryonic development, wound healing and normal tissue homeostasis.To test the effect of EGF on cell proliferation of Balb/3T3, Balb/3T3 cells were seeded into triplicate wells of 96-well plates at a density of 4, 000 cells/well and allowed to attach overnight, then the medium was replaced with various concentrations of recombinant human EGF with serum-free standard DMEM. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μl of CCK-8 solution was added to each well of the plate，then measure the absorbance at 450 nm using a microplate reader after incubating the plate for 1-4 hours at 37 ° C. The dose-effect curve of EGF was shown in Figure 1. It was obvious that EGF significantly promoted cell proliferation of Balb/3T3 cells .The ED50 is 0.836 ng/ml.

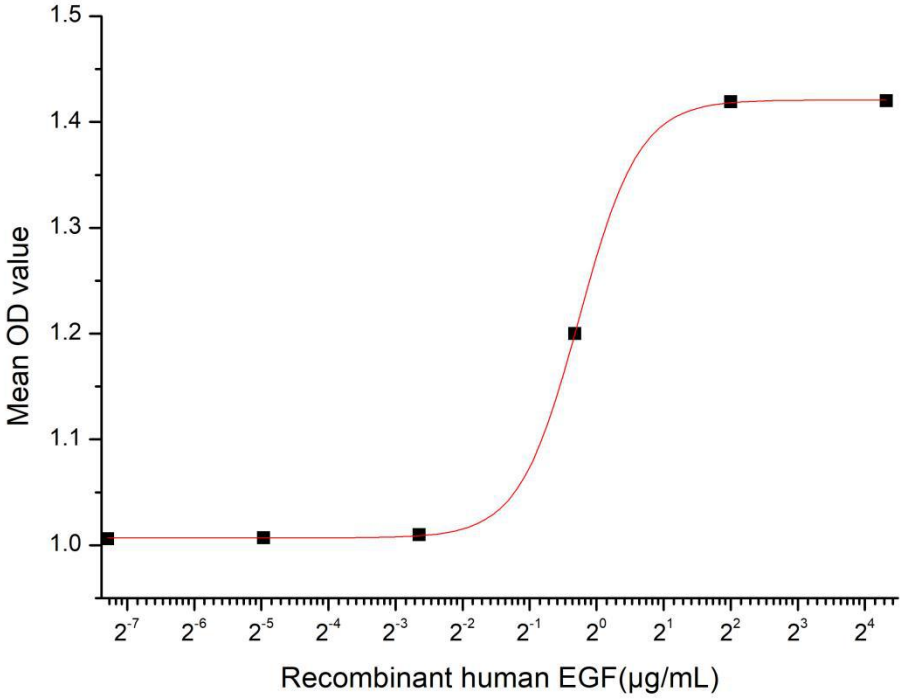


Figure 1. Cell proliferation of Balb/3T3 cells after stimulated with EGF.

[IDENTIFICATION]

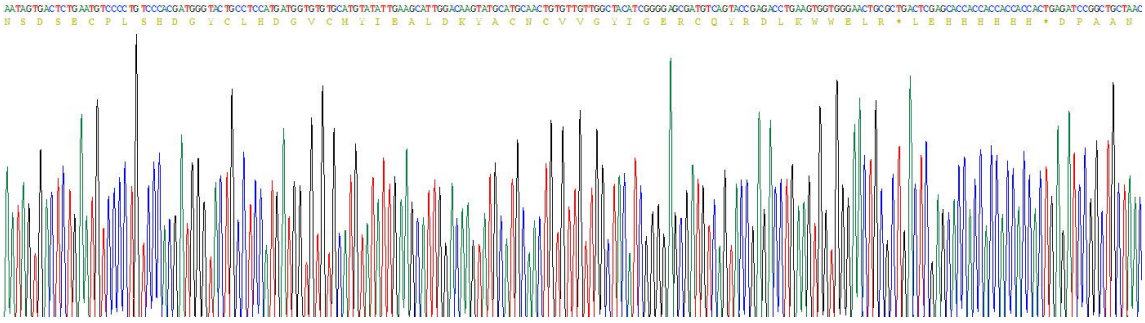


Figure 2. Gene Sequencing (extract)

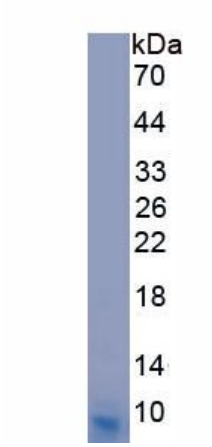


Figure 3. SDS-PAGE

Sample: Active recombinant EGF, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.