

APB479Hu62 100µg

Active Heparin Binding Epidermal Growth Factor Like Growth Factor (HBEGF)

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: Asp63~Leu148

Tags: N-terminal His-tag

Purity: >80%

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: 9.6

Predicted Molecular Mass: 11.3kDa

Accurate Molecular Mass: 16&20kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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 37°C 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]

DLQEADLDLLRVTLSKPKALATPNKEEHGKRKKKGKGLGKKRDPCLRKYKDFCIHGECKYVK
ELRAPSCICHPGYHGERCHGLSL

[ACTIVITY]

Heparin-binding Epidermal Growth Factor-like Growth Factor (HBEGF) is a member of the epidermal growth factor (EGF) family. As a ligand for the EGF receptor (EGFR), HBEGF can bind to both 170 kDa EGFR and 180 kDa ErbB4, and through heterodimerization, ErbB2. HBEGF protein involves in several processes, including epidermal growth factor receptor signaling pathway , phosphatidylinositol 3-kinase/protein kinase B signal transduction and wound healing. To test the effect of HBEGF on cell proliferation, BALB/3T3 cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant human HBEGF. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μ l of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate

reader after incubating the plate for 1-4 hours at 37 °C. Cell viability was assessed by CCK-8 assay after incubation with recombinant human HBEGF for 72h. The result was shown in Figure 1. It was obvious that HBEGF significantly increased cell viability of BALB/3T3 cells. The ED50 of recombinant human HBEGF is 1.033 μ g/ml.

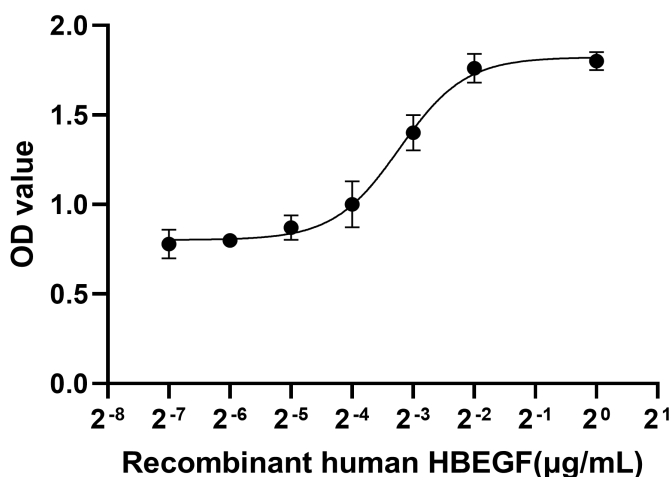


Figure1. The dose-effect curve of recombinant human HBEGF on BALB/3T3 cells

[IDENTIFICATION]

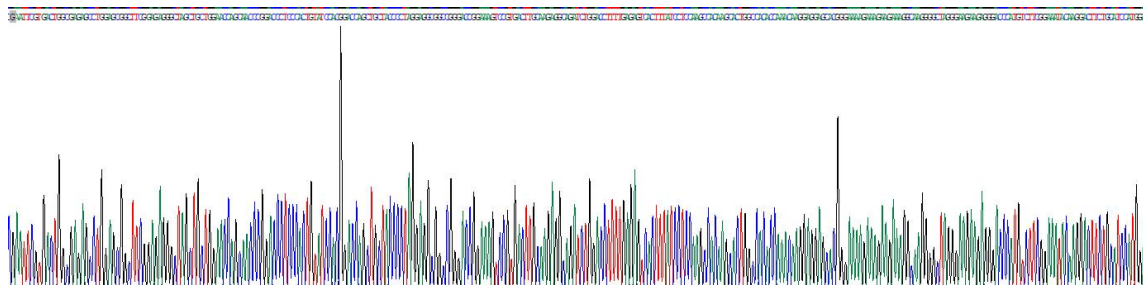


Figure 2. Gene Sequencing (extract)



Figure 3. SDS-PAGE

Sample: Active recombinant HBEGF, 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.