

APA051Ra01 100µg
Active Insulin Like Growth Factor 2 (IGF2)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala25~Glu91

Tags: N-terminal His-tag

Purity: >97%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 7.7

Predicted Molecular Mass: 8.5kDa

Accurate Molecular Mass: 10kDa 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 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]

AYRPSE TLGGELVDT LQFVCSRGF
YFSRPSSRAN RRSRGIVEEC CFRSCDLALL ETYCATPAKS E

[ACTIVITY]

Insulin-like growth factor 2 (IGF2) is one of three protein hormones that share structural similarity to insulin. It has growth-regulating, insulin-like and mitogenic activities. IGF2 exerts its effects by binding to the IGF-1 receptor and to the short isoform of the insulin receptor. IGF2 may also bind to the IGF2 receptor (also called the cation-independent mannose 6-phosphate receptor), which acts as a signalling antagonist; that is, to prevent IGF2 responses. Besides, Insulin Receptor (INSR) has been identified as an interactor of IGF2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat IGF2 and recombinant human INSR. Briefly, IGF2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to INSR-coated microtiter wells and incubated for 2h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-IGF2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 5 times. With the addition of substrate solution , wells were incubated 15-25 minutes at 37 °C . Finally, add 50µL stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant rat IGF2 and recombinant human INSR was shown in Figure 1, the EC50 for this effect is 0.71 ug/mL.

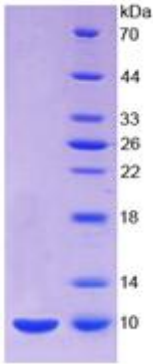


Figure 3. SDS-PAGE

Sample: Active recombinant IGF2, Rat

[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.