APA416Mu01 100μg
Active Early Growth Response Protein 1 (EGR1)
Organism Species: *Mus musculus (Mouse)*
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: Gln273~Ser431
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 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: 10.5
Predicted Molecular Mass: 22.2kDa
Accurate Molecular Mass: 22&27kDa 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 2-8ºC for one month.

Aliquot and store at -80ºC 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]

QGLENRTQ QPSLTPLSTI KAFATQSGSQ
DLKALNTTYQ SQLIKPSRMR KYPNRPSKTP PHERPYACPV ESCDRRFSRS
DELTRHIRIH TGQKPFQCRI CMRNFSRSDH LTTHIRTHTG EKPFACDICG
RKFARSDERK RHTKIHLRQK DKKADKSVVA S

[ACTIVITY]

Early Growth Response Protein 1 (EGR1) is a zinc-finger transcription factor that plays a pivotal role in various cellular processes. It is rapidly and transiently induced in response to a wide range of extracellular stimuli, including growth factors, cytokines, oxidative stress, and neuronal activity. This immediate early gene product acts as a molecular switch, regulating the expression of downstream target genes involved in cell proliferation, differentiation, apoptosis, and synaptic plasticity. To test the effect of EGR1 on cell proliferation, SKOV3 cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant mouse EGR1. 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 the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 ℃. Cell viability was assessed by CCK-8 assay after incubation with recombinant mouse EGR1 for 72h. The result was shown in Figure 1. It was obvious that EGR1 significantly decreased cell viability of SKOV3 cells. The ED50 of recombinant mouse EGR1 is 2.836 µg/ml.

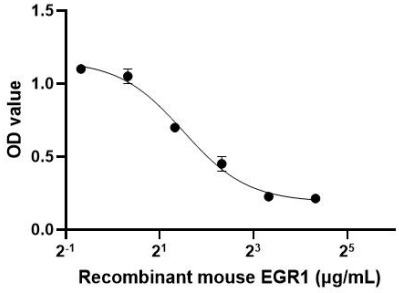

Figure.1 The dose-effect curve of recombinant mouse EGR1 on SKOV3 cells

[IDENTIFICATION]

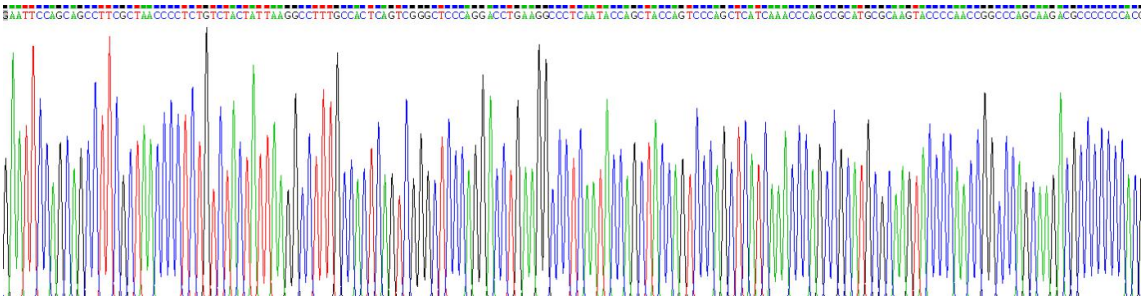

Figure 2. Gene Sequencing (extract)

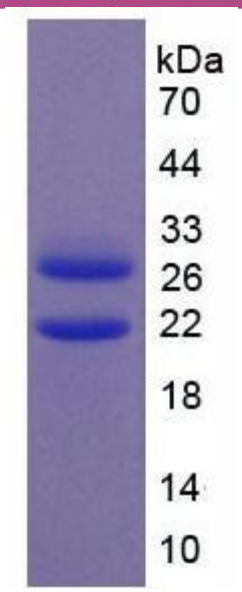

Figure 3. SDS-PAGE

Sample: Active recombinant EGR1, Mouse

[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.