

APA930Hu01 100µg

Active Extracellular Signal Regulated Kinase 2 (ERK2)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Tyr25~Ser360

Tags: N-terminal His-tag

Purity: >95%

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.0

Predicted Molecular Mass: 42.8kDa

Accurate Molecular Mass: 43kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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]

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YTNLSY IGEGAYGMVC SAYDNNVKVR  
VAIKKISPFE HQTYCQRTL R EIKILLRFRH ENIIGINDII RAPTIEQMKD  
VYIVQDLMET DLYKLLKTQH LSN DHICYFL YQILRGLKYI H SANVLHRDL  
KPSNLLLNTT CDLKICDFGL ARVADPDHDH TGFLTEYVAT RWYRAPEIML  
NSKGYTKSID IWSVGCILAE MLSNRPIFPG KHYLDQLNHI LGILGSPSQE  
DLNCIINLKA RNYLLSLPHK NKVPWNRLF NADSKALDLL DKMLTFNPHK  
RIEVEQALAH PYLEQYYDPS DEPIAEAPFK FDMELDDL PK EKLKELIFEE  
TARFQPGYRS
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[ACTIVITY]

In molecular biology, extracellular signal-regulated kinases (ERKs) or classical MAP kinases are widely expressed protein kinase intracellular signalling molecules that are involved in functions including the regulation of meiosis, mitosis, and postmitotic functions in differentiated cells. Many different stimuli, including growth factors, cytokines, virus infection, ligands for heterotrimeric G protein-coupled receptors, transforming agents, and carcinogens, activate the ERK pathway. Extracellular signal-regulated kinase 2" (ERK2) is also known as mitogen-activated protein kinase 1 (MAPK1). Receptor-linked tyrosine kinases, Ras, Raf, MEK, and MAPK could be fitted into a signaling cascade linking an extracellular signal to MAPK activation. Besides, Protein Tyrosine Phosphatase Receptor Type J (PTPRJ) has been identified as an interactor of ERK2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human ERK2 and recombinant human PTPRJ. Briefly, ERK2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then

transferred to PTPRJ-coated microtiter wells and incubated for 2h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-ERK2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 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 450nm immediately. The binding activity of ERK2 and PTPRJ was shown in Figure 1, and this effect was in a dose dependent manner.

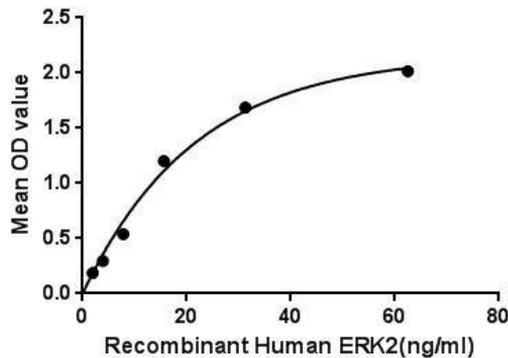


Figure 1. The binding activity of ERK2 with PTPRJ.

[IDENTIFICATION]

TTACGCAACTCTCTGTCATCGGGGAGGCGCCCTGGGGATGGTGTCTCTGCTTATGATATGTCGACGAAAGTTCGGTAGCTATCGAAGAAATCGAGCCCTTGGAGCCGAGCTACTGCGAGGAGCCCTGGGGGATAAATCTTACTGCGCTCAGCATGAGACATCTTGGATCGATGACATTATCGAGCGA
 YTNLSYVIGEGAYGHVCSAYDNVNRVRYVAIKKISPFERQTYCORTLREIKILLRFRHENIIGINDIIRAP

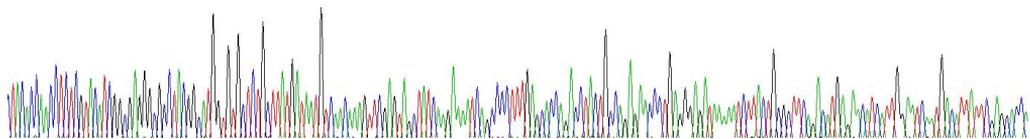


Figure 2. Gene Sequencing (extract)

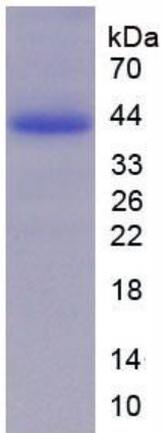


Figure 3. SDS-PAGE

Sample: Active recombinant ERK2, Human

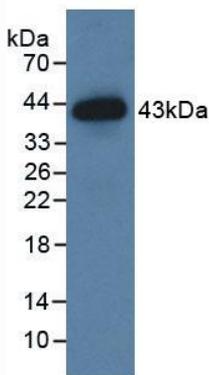


Figure 4. Western Blot

Sample: Recombinant ERK2, Human;

Antibody: Rabbit Anti-Human ERK2 Ab (PAA930Hu01)

[IMPORTANT NOTE]

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