

**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

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Tyr25~Ser360

**Tags:** N-terminal His-tag

**Purity:** >95%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

**Original Concentration:** 1000µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 7.0

**Predicted Molecular Mass:** 42.8kDa

**Accurate Molecular Mass:** 43kDa 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.

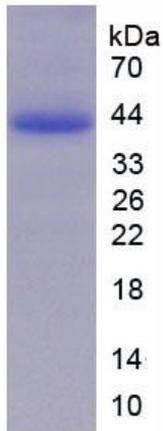
## **[ SEQUENCE ]**

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YTNLSY IGEGAYGMVC SAYDNVNKVR  
VAIKKISPFH HQTYCQRTL R EIKILLRFRH ENIIGINDII RAPTIEQMKD  
VYIVQDLMET DLYKLLKTQH LSNDHICYFL YQILRGLKYI HSANVLHRDL  
KPSNLLLNTT CDLKICDFGL ARVADPDHDH TGFLT EYVAT RWYRAPEIML  
NSKGYTKSID IWSVGCILAE MLSNRPIFPG KHYLDQLNHI LGILGSPSQE  
DLNCIINLKA RNYLLSLPHK NKVPWNRLFP NADSKALDLL DKMLTFNPHK  
RIEVEQALAH PYLEQYYDPS DEPIAEAPFK FDMELDDL PK EKLKELIFEE  
TARFQPGYRS
```

## **[ ACTIVITY ]**

Extracellular Signal Regulated Kinase 2 (ERK2) is a 42-kDa protein serine/threonine kinase that is a member of the MAP kinase family. ERK2 is ubiquitously distributed in tissues with the highest expression in heart, brain, and spinal cord. Depending on the cellular context, the MAPK/ERK cascade mediates diverse biological functions such as cell growth, adhesion, survival and differentiation through the regulation of transcription, translation, cytoskeletal rearrangements. The MAPK/ERK cascade also plays a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. It is reported that ERK2 can interact with STAT3 and treatment of cells with a MEK-ERK inhibitor blocks STAT3 S727 phosphorylation in response to IL-2. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human ERK2 and recombinant human STAT3. Briefly, ERK2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to STAT3-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-ERK2 pAb, then aspirated and washed 3 times.





**Figure 3. SDS-PAGE**

**Sample: Active recombinant ERK2, 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.