

Active Extracellular Signal Regulated Kinase 2 (ERK2)

Catalog No.: **TP09194 50µg**

Sequence Information

Species: Human Gene ID:5594

Swiss Prot:P28482 Synonyms:MAPK1; P38; P40; ERK2; ERT1;

MAPK2; P42MAPK; P42-MAPK;

PRKM1; PRKM2; P41; P41mapk;

P41-mapk; Mitogen-Activated Protein

Kinase 1; Mitogen-activated protein

kinase 2

Residues:Tyr25~Ser360

YTNLSYIGEGAYGMVCSAYDNVNKVRVAIKKISPFEHQTYCQRTLREIKILLRF

RHENIIGINDIIRAPTIEQMKDVYIVQDLMETDLYKLLKTQHLSNDHICYFLYQ

ILRGLKYIHSANVLHRDLKPSNLLLNTTCDLKICDFGLARVADPDHDHTGFLTE

YVATRWYRAPEIMLNSKGYTKSIDIWSVGCILAEMLSNRPIFPGKHYLDOLNHI

LGILGSPSQEDLNCIINLKARNYLLSLPHKNKVPWNRLFPNADSKALDLLDKML

TFNPHKRIEVEQALAHPYLEQYYDPSDEPIAEAPFKFDMELDDLPKEKLKELIF

EETARFOPGYRS

Product Information

Source: Prokaryotic expression.

Host: E.coli

Tags: N-terminal His-Tag

Subcellular Location: Secreted

Purity: >90%

Traits: Freeze-dried powder

Buffer formulation: PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and

Proclin300.

Original Concentration: 200µg/mL

Applications: Positive Control; Immunogen; SDS-PAGE; WB.

(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 ddH₂O to a concentration of 0.1-0.5 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.

[ACTIVITY]

In molecular biology, extracellular signal-regulated kinases (ERKs) or classicalMAP kinases are widely expressed protein kinase intracellular signallingmolecules that are involved in functions including the regulation of meiosis, mitosis, and postmitotic functions in differentiated cells. Many different stimuli, includinggrowth factors, cytokines, virus infection, ligands for heterotrimeric Gprotein-coupled receptors, transforming agents, and carcinogens, activatethe ERK pathway. Extracellular signal-regulated kinase 2" (ERK2) is also knownasmitogen-activated protein kinase 1 (MAPK1). Receptor-linked tyrosinekinases, Ras, Raf, MEK, and MAPK could be fitted into a signaling cascadelinkinganextracellular signal to MAPK activation. Besides, Protein Tyrosine PhosphataseReceptor Type J (PTPRJ) has been identified as an interactor of ERK2. thusabinding ELISA assay was conducted to detect the interaction of recombinanthuman ERK2 and recombinant human PTPRJ. Briefly, ERK2 were dilutedseriallyin PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were thentransferred to PTPRJ-coated microtiter wells and incubated for 2h at 37 $^{\circ}\mathrm{C}$. Wellswere washed with PBST and incubated for 1h with anti-ERK2 pAb, thenaspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wellswere aspirated and washed 3 times. With the addition of substrate solution, wellswere incubated 15-25 minutes at 37 °C. Finally, add 50µL stop solution tothewellsand read at 450nm immediately. The binding activity of ERK2 and PTPRJwasshown in Figure 1, and this effect was in a dose dependent manner.



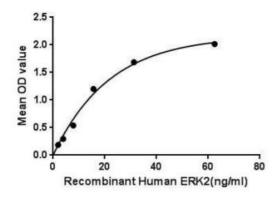


Figure 1. The binding activity of ERK2 with PTPRJ.

[IDENTIFICATION]

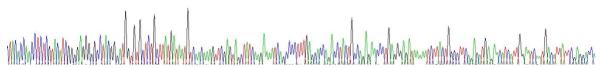


Figure 2. Gene Sequencing (Extract)

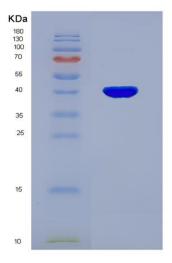


Figure 3. SDS-PAGE

[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.

