

Active Recombinant Human MAPK1 protein, His-tagged

Cat. No. MAPK1-2418H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MAPK1 protein(25-360 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	25-360 aa
Form	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Bio-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

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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. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 μ stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human ERK2 and recombinant human STAT3 was shown in Figure, the EC₅₀ for this effect is 1.06 μ g/mL.

Molecular Mass	42.8kDa
Endotoxin	<1.0EU per 1g (determined by the LAL method).
Purity	> 95%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	MAPK1 mitogen-activated protein kinase 1 [Homo sapiens]
Official Symbol	MAPK1
Synonyms	MAPK1; mitogen-activated protein kinase 1; PRKM1, PRKM2; ERK; ERK2; MAPK2; p41mapk; ERK-2; MAPK 2; p42-MAPK; MAP kinase 1; MAP kinase 2; MAP kinase isoform p42; protein tyrosine kinase ERK2; mitogen-activated protein kinase 2; extracellular signal-regulated kinase 2; p38; p40; p41; ERT1; PRKM1; PRKM2;

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P42MAPK;

Gene ID 5594

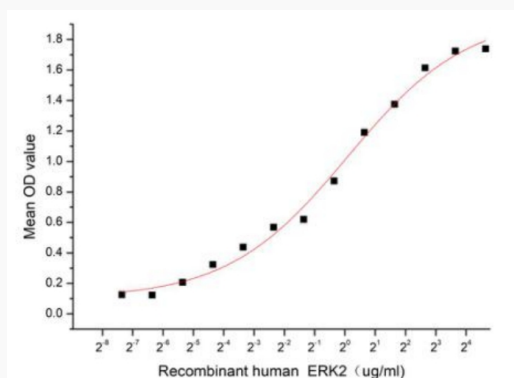
mRNA Refseq NM_002745

Protein Refseq NP_002736

MIM 176948

UniProt ID P28482

Activity

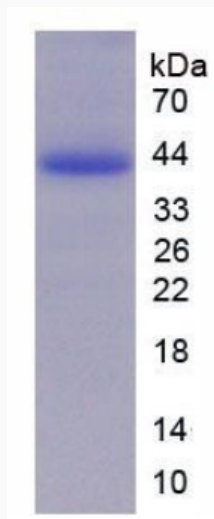


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