



MAP Kinase p44/42, phosphorylated (Thr202/Tyr204) (MAPK3/MAPK1, Mitogen-activated Protein Kinase 1, MAP Kinase 1, MAPK 1, ERT1, Extracellular Signal-regulated Kinase 2, ERK-2, MAP Kinase Isoform p42, p42-MAPK, Mitogen-activated Protein Kinase 2, MAP Kinase 2, MAPK 2, ERK2, PRKM1, PRKM2 / Mitogen-activated Protein Kinase 3, MAP Kinase 3, MAPK 3, ERT2, Extracellular Signal-regulated Kinase 1, ERK-1, Insulin-stimulated MAP2 Kinase, MAP Kinase Isoform p44, p44-MAPK, Microtubule-associated Protein 2 Kinase, p44-ERK1, ERK1, PRKM3)

Catalog number

M2352-20E

Supplier

United States Biological

Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs such as cell proliferation, differentiation, motility, and death. The p44/42 MAPK (Erk1/2) signaling pathway can be activated in response to a diverse range of extracellular stimuli including mitogens, growth factors, and cytokines (1-3) and is an important target in the diagnosis and treatment of cancer (4). Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK or MAP3K), a MAP kinase kinase (MAPKK or MAP2K), and a MAP kinase (MAPK). Multiple p44/42 MAP3Ks have been identified, including members of the Raf family as well as Mos and Tpl2/Cot. MEK1 and MEK2 are the primary MAPKKs in this pathway (5,6). MEK1 and MEK2 activate p44 and p42 through phosphorylation of activation loop residues Thr202/Tyr204 and Thr185/Tyr187, respectively. Several downstream targets of p44/42 have been identified, including p90RSK (7) and the transcription factor Elk-1 (8,9). p44/42 are negatively regulated by a family of dual-specificity (Thr/Tyr) MAPK phosphatases, known as DUSPs or MKPs (10), along with MEK inhibitors such as U0126 and PD98059.

Applications

Suitable for use in Western Blot, Immunoprecipitation and Immunohistochemistry. Other applications have not been tested.

Recommended Dilutions

Western Blot: 1:1000

Immunoprecipitation: 1:50

Immunohistochemistry (Paraffin): 1:100

Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at



-20°C. Aliquots are stable for 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Synthetic phospho-peptide corresponding to residues surrounding Thr202/Tyr204 of human p44 MAP kinase.

Formulation

Supplied as a liquid in 10mM sodium HEPES, pH 7.5, 150mM sodium chloride, 0.1mg/ml BSA, 0.02% sodium azide, 50% glycerol.

Purity

Purified

Specificity

Recognizes endogenous levels of human p44 and p42 MAP Kinase (Erk1 and Erk2) when dually phosphorylated at Thr202 and Tyr204 of Erk1 (Thr185 and Tyr187 of Erk2), and singly phosphorylated at Thr202. Does not crossreact with the corresponding phosphorylated residues of either JNK/SAPK or p38 MAP kinase. Species Crossreactivity: mouse, rat, monkey, mink, porcine, zebrafish and Drosophila.

Product Type

Mab

Source

human

Isotype

IgG

Grade

Purified

Applications

IHC IP WB

Crossreactivity

Dr Hu Mk Mo Po Rt Ze

Storage

-20°C

MW

4442

BSA Free

Phosphorylated

Reference



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