



Rabbit Anti-phospho-MAPK3 (Tyr204) antibody

SL5497R

Product Name:	phospho-MAPK3 (Tyr204)
Chinese Name:	磷酸化丝裂原活化蛋白激酶3抗体
Alias:	ERK1 (phospho Y204); p-ERK1 (phospho Y204); MAPK3(phospho Y204); ERK/MAPK(phospho T202/Y204); p44/42 MAP Kinase(Phospho-Thr202); ERK 1; ERK; ERK-1; ERK1; Extracellular Signal Regulated Kinase 1; Extracellular signal related kinase 1; Extracellular signal-regulated kinase 1; HGNC6877; HS44KDAP; HUMKER1A; MAP kinase 1; MK03_RAT; MK03_HUMAN; MAP Kinase; MAP kinase isoform p44; MAPK 1; MAPK; MAPK1; MAPK3; MGC20180; Mitogen-activated protein kinase 1; OTTHUMP00000174538; OTTHUMP00000174541; p44 ERK1; p44 MAPK; p44-ERK1; p44-MAPK; P44ERK1; P44MAPK;
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	43kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from rat MAPK3 around the phosphorylation site of Tyr204:TE(p-Y)VA
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of

	antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>The protein encoded by this gene is a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. The activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene.</p> <p>Function: Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK1/ERK2 and MAPK3/ERK1 are the 2 MAPKs which play an important role in the MAPK/ERK cascade. They participate also in a signaling cascade initiated by activated KIT and KITLG/SCF. 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 plays also a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. About 160 substrates have already been discovered for ERKs. Many of these substrates are localized in the nucleus, and seem to participate in the regulation of transcription upon stimulation. However, other substrates are found in the cytosol as well as in other cellular organelles, and those are responsible for processes such as translation, mitosis and apoptosis. Moreover, the MAPK/ERK cascade is also involved in the regulation of the endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC); as well as in the fragmentation of the Golgi apparatus during mitosis. The substrates include transcription factors (such as ATF2, BCL6, ELK1, ERF, FOS, HSF4 or SPZ1), cytoskeletal elements (such as CANX, CTTN, GJA1, MAP2, MAPT, PXN, SORBS3 or STMN1), regulators of apoptosis (such as BAD, BTG2, CASP9, DAPK1, IER3, MCL1 or PPARG), regulators of translation (such as EIF4EBP1) and a variety of other signaling-related molecules (like ARHGEF2, FRS2 or GRB10). Protein kinases (such as RAF1, RPS6KA1/RSK1, RPS6KA3/RSK2, RPS6KA2/RSK3, RPS6KA6/RSK4, SYK, MKNK1/MNK1, MKNK2/MNK2, RPS6KA5/MSK1, RPS6KA4/MSK2, MAPKAPK3 or MAPKAPK5) and phosphatases (such as DUSP1, DUSP4, DUSP6 or DUSP16) are other substrates which enable the propagation of the MAPK/ERK signal to additional cytosolic and nuclear targets, thereby extending the specificity of the cascade.</p> <p>Subunit: Binds both upstream activators and downstream substrates in multimolecular complexes. Found in a complex with at least BRAF, HRAS1, MAP2K1/MEK1, MAPK3 and RGS14. Interacts with ADAM15, ARRB2, CANX, DAPK1 (via death domain), HSF4, IER3, MAP2K1/MEK1, MORG1, NISCH, PEA15, SGK1 and MKNK2 (By similarity). MKNK2 isoform 1 binding prevents from dephosphorylation and inactivation.</p>

Interacts with TPR (By similarity).

Subcellular Location:

Cytoplasm (By similarity). Nucleus. Note=Autophosphorylation at Thr-207 promotes nuclear localization (By similarity). PEA15-binding redirects the biological outcome of MAPK3 kinase-signaling by sequestering MAPK3 into the cytoplasm (By similarity). Isoform 2: Nucleus.

Tissue Specificity:

Highest levels within the nervous system, expressed in different tissues, mostly in intestine, placenta and lung.

Post-translational modifications:

Phosphorylated upon FLT3 and KIT signaling. Ligand-activated ALK induces tyrosine phosphorylation (By similarity). Dephosphorylated by PTPRJ at Tyr-205 (By similarity). Dually phosphorylated on Thr-203 and Tyr-205, which activates the enzyme.

Similarity:

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.
Contains 1 protein kinase domain.

SWISS:

P21708

Gene ID:

50689

Database links:

[Entrez Gene: 5595](#) Human

[Entrez Gene: 26417](#) Mouse

[Entrez Gene: 50689](#) Rat

[Omin: 601795](#) Human

[SwissProt: P27361](#) Human

[SwissProt: Q63844](#) Mouse

[SwissProt: P21708](#) Rat

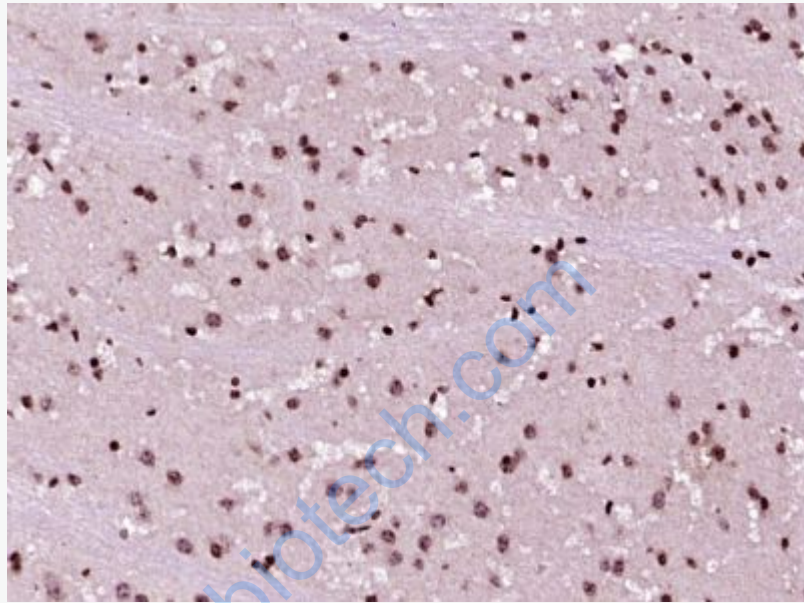
[Unigene: 861](#) Human

[Unigene: 8385](#) Mouse

[Unigene: 2592](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-MAPK3(Tyr204)) Polyclonal Antibody, Unconjugated (SL5497R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.