

Rabbit Anti-MEK1 + MEK2 antibody

SL1041R

Product Name MEK1 + MEK2

Chinese Name 丝裂原活化蛋白激酶激酶 1 抗体

Alias MEK-1/2; MEK1 + 2; MEK1 / 2; MEK-2; Dual specificity mitogen activated protein kinase kinase 1; ERK activator kinase 1; MAP kinase kinase 1; MAP kinase/Erk kinase 1; MAP/Erk kinase 1; Map2K1; MAPK/ERK kinase 1; MAPKK 1; MAPKK1; MEK 1; MEKK1; Mitogen activated protein kinase kinase 1; MKK 1; MKK1; PRKMK 1; PRKMK1; Protein kinase mitogen activated kinase 1 (MAP kinase kinase 1); Protein kinase mitogen activated kinase 1; Protein kinase mitogen activated, kinase 1; MP2K1_HUMAN.

Research Area Tumour Cell biology immunology Neurobiology Signal transduction Apoptosis Kinases and Phosphatases

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Chicken, Dog, Pig, Cow, Rabbit,)
IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 43kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human MAPKK1: 301-393/393

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

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

PubMed

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The protein encoded by this gene is a member of the dual specificity protein kinase family, which acts as a mitogen-activated protein (MAP) kinase kinase. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals. This protein kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development.

Function:

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of 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.

**Product
Detail**

Subunit:

Found in a complex with at least BRAF, HRAS1, MAP2K1, MAPK3/ERK1 and RGS14. Forms an heterodimer with MAP2K2/MEK2. Forms heterodimers with KSR2 which further dimerize to form tetramers. Interacts with ARBB2, LAMTOR3, MAPK1/ERK2, MORG1 and RAF1. Interacts with PPARG and with isoform 1 of VRK2. Interacts with Yersinia yopJ. Interacts with SGK1. Interacts with BIRC6/bruce.

Subcellular Location:

Cytoplasm, cytoskeleton, centrosome. Cytoplasm, cytoskeleton, spindle pole body. Cytoplasm. Nucleus. Note=Localizes at centrosomes during prometaphase, midzone

during anaphase and midbody during telophase/cytokinesis.

Tissue Specificity:

Widely expressed, with extremely low levels in brain.

Post-translational modifications:

Phosphorylation at Ser-218 and Ser-222 by MAP kinase kinase kinases (RAF or MEKK1) positively regulates kinase activity. Also phosphorylated at Thr-292 by MAPK1/ERK2 and at Ser-298 by PAK. MAPK1/ERK2 phosphorylation of Thr-292 occurs in response to cellular adhesion and leads to inhibition of Ser-298 phosphorylation by PAK.

Similarity:

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.

Contains 1 protein kinase domain.

SWISS:

Q02750

Gene ID:

5604

Database links:

[Entrez Gene: 5604](#) Human

[Entrez Gene: 5605](#) Human

[Omim: 176872](#) Human

[Omim: 601263](#) Human

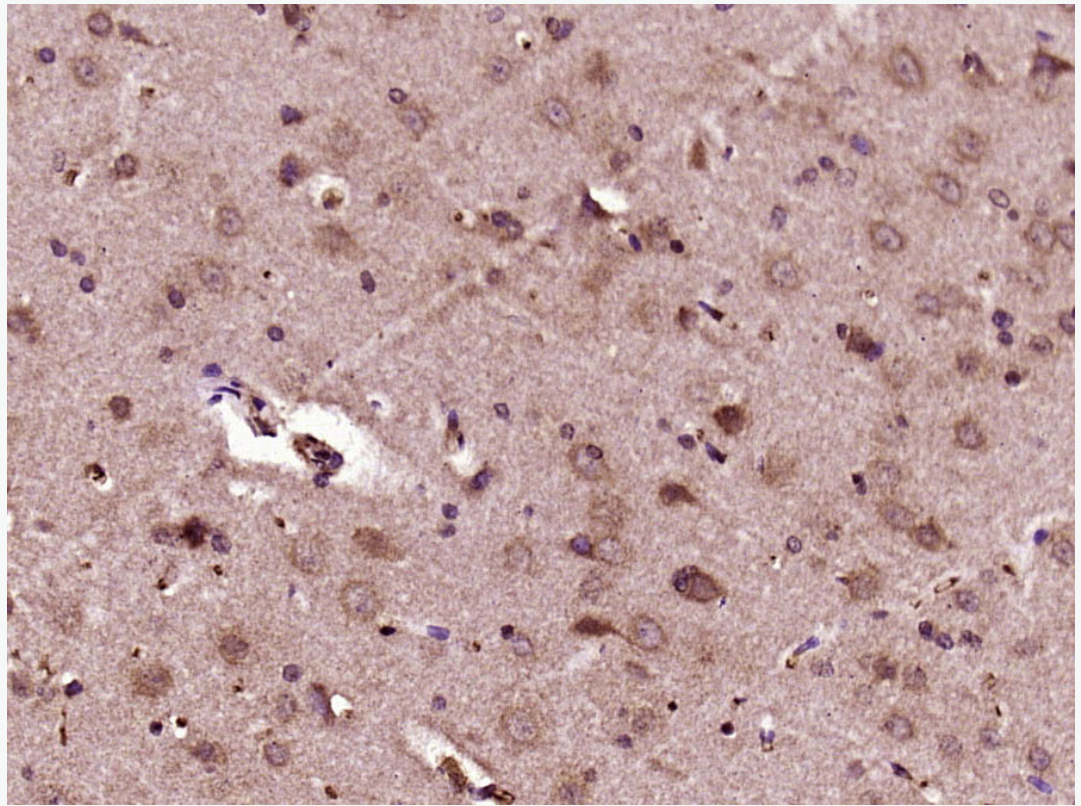
[SwissProt: P36507](#) Human

[SwissProt: Q02750](#) Human

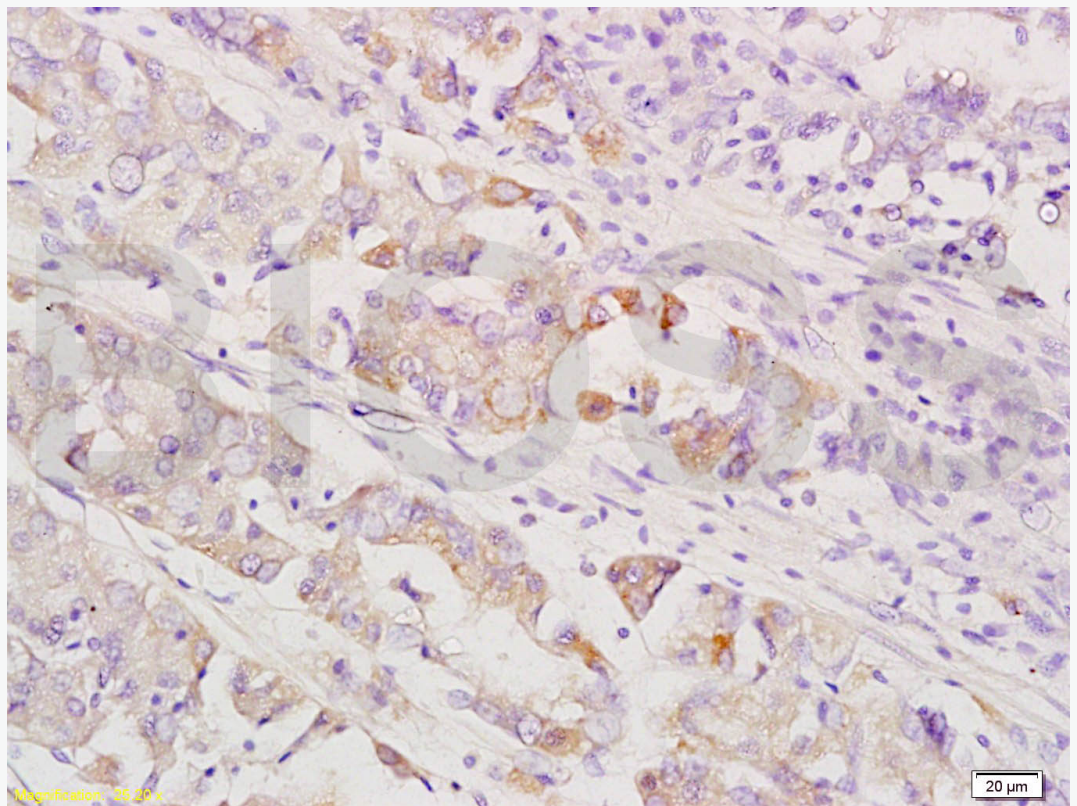
Kinases and Phosphatases (Kinases and Phosphatases)

丝裂原活化蛋白激酶激酶(MAPKK1)又称(MEKK-1)是 Signal transduction 途径中的重要成员。

**Product
Picture**



Paraformaldehyde-fixed, paraffin embedded (Rat 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 (MEK1 + MEK2) Polyclonal Antibody, Unconjugated (SL1041R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

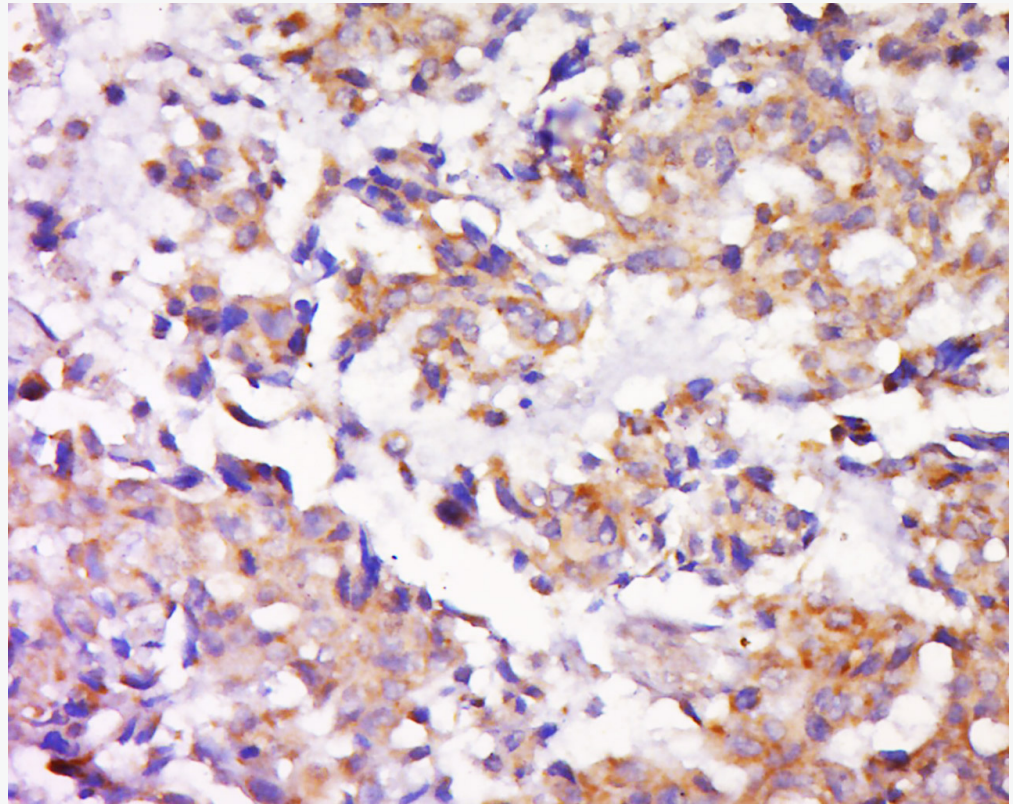


Tissue/cell: human gastric carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-MEK1/2(MAPKK1) Polyclonal Antibody,

Unconjugated(SL1041R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Map2K1 Polyclonal Antibody, Unconjugated(SL1041R) 1:500, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining