SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-MEK1 antibody

Catalog Number: SL1433R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	MEK1
Immunogen:	KLH conjugated synthetic peptide derived from human MEK1: 2-150/393
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human(predicted:Mouse,Rat,Chicken,Dog,Pig,Rabbit)
Predicted MW.:	43kDa
Subcellular Location:	The nucleus cytoplasmic
Background:	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,

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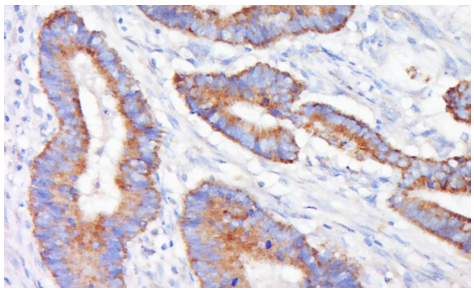
	metabolism and cytoskeletal rearrangements. **Function:** Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and 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. **Subunit:** Found in a complex with at least BRAF, HRAS1, MAP2K1, MAPK3/ERK1 and RGS14 (By similarity). Forms an heterodimer with MAP2K2/MEK2 (By similarity). Forms heterodimers with KSR2 which further dimerize to form tetramers (By similarity). Interacts with ARBB2, LAMTOR3, MAPK1/ERK2, MORG1 and RAF1 (By similarity). 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.

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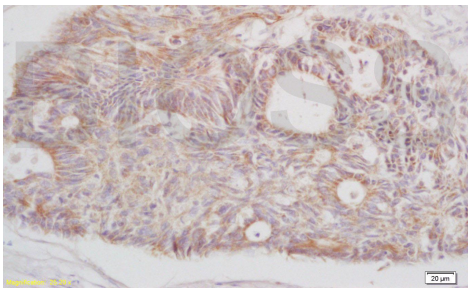
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	Similarity: Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 5604 Human **Entrez Gene:** 26395 Mouse **Entrez Gene:** 170851 Rat Omim: 176872 Human **SwissProt:** Q02750 Human **SwissProt:** P31938 Mouse **SwissProt:** Q01986 Rat **Unigene:** 145442 Human **Unigene:** 248907 Mouse **Unigene:** 5850 Rat

[VALIDATION IMAGES]



Paraformaldehyde-fixed, paraffin embedded (human colon cancer); 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) Polyclonal Antibody, Unconjugated (SL1433R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: human rectal 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/MAPKK1/MEKK1 Polyclonal Antibody, Unconjugated(SL1433R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

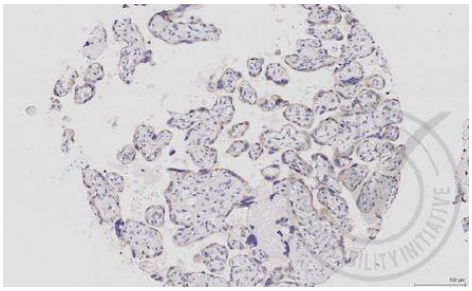
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Images provided the Independent Validation Program (badge number 029646)Formalin-fixed and paraffin embedded human placenta labeled with Rabbit Anti-MEK1 Polyclonal Antibody (SL1433R) at 1:250 overnight at room temperature followed by conjugation to secondary antibody.

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