SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-MEK1 antibody

SL1433R

Product Name:	MEK1
Chinese Name:	MEK1/MAPKK1抗体(N-端)
Alias:	mitogen activated protein kinase kinase 1; Dual specificity mitogen-activated protein kinase kinase 1; MAP kinase kinase 1; MAPKK 1; ERK activator kinase 1; MAPK/ERK kinase 1; MEK1; Map2k1; MAPKK1; Mek1; MEKK1; Prkmk1; MP2K1_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Rabbit,
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:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MEK1:2-150/393
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:	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. **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.

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: 26395 Mouse

Entrez Gene: 170851 Rat

Omim: 176872 Human

SwissProt: Q02750 Human

SwissProt: P31938 Mouse

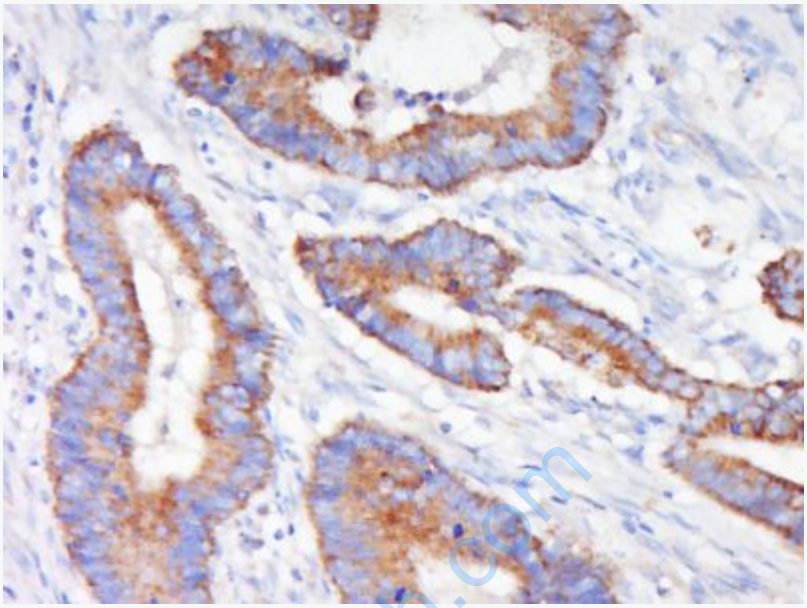
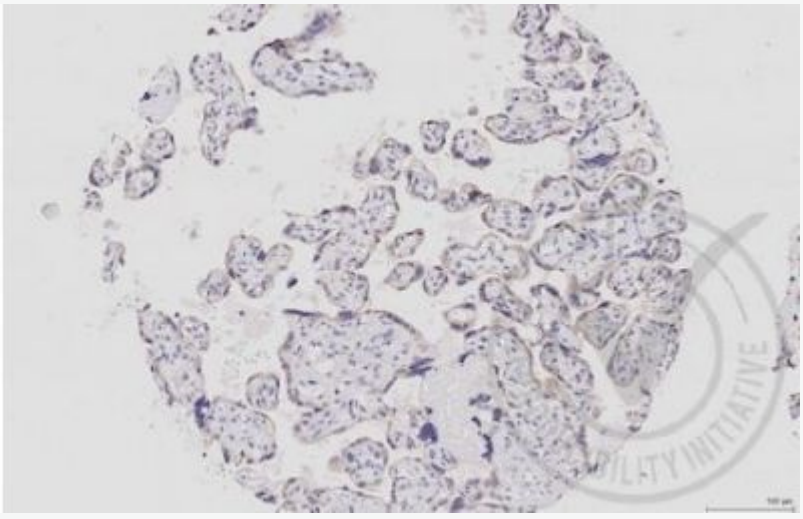
SwissProt: Q01986 Rat

Unigene: 145442 Human

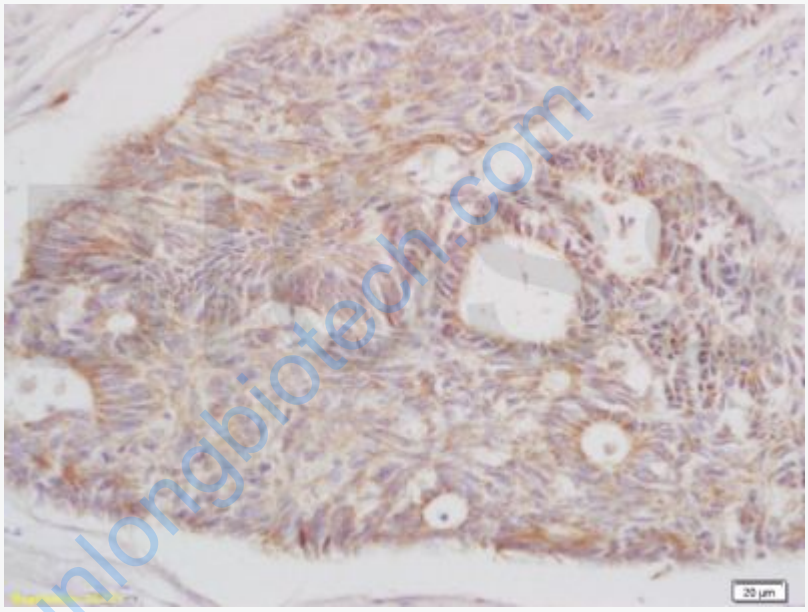
Unigene: 248907 Mouse

Unigene: 5850 Rat

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 (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. 

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.



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

Antigen retrieval: citrate buffer (0.01M, 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℃ 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