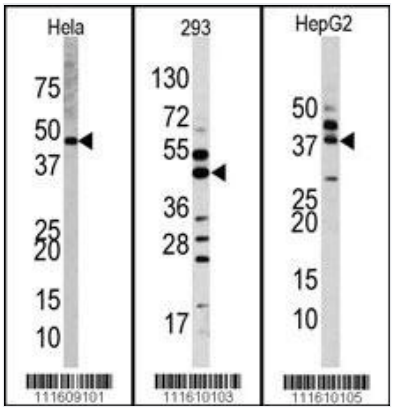
MAPK1 Antibody – Rabbit Polyclonal

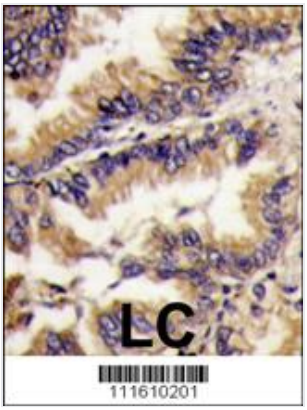
PRODUCT OVERVIEW

Product Name	MAPK1, Polyclonal Antibody
Full Product Name	MAPK1 Antibody (Center)
Product Gene Name	anti-MAPK1 antibody
Product Synonym Names	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; MAPK1; ERK2; PRKM1; PRKM2
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human (Predicted Reactivity: Bovine, Mouse, Rat, Xenopus)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 2 (lot specific)
Specificity	This MAPK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 154-183 amino acids from the Central region of human MAPK1.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	MAPK1 peptide (MBS9230914) is used for blocking the activity of MAPK1 antibody (MBS9206161)
Molecular Weight	41390
Immunogen Sequence Positions	154-183
OMIM	176948
3D Structure	ModBase 3D Structure for P28482
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-MAPK1 antibody	Cancer; Cell biology; Immunology; Metabolism; Signal transduction
Applications Tested/Suitable for anti-MAPK1 antibody	ELISA (EIA), Immunohistochemistry (IHC), Flow Cytometry (FC/FACS), Western Blot (WB)
Application Notes for anti-MAPK1 antibody	WB~~1:1000
Related Product Information for anti-MAPK1 antibody	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.

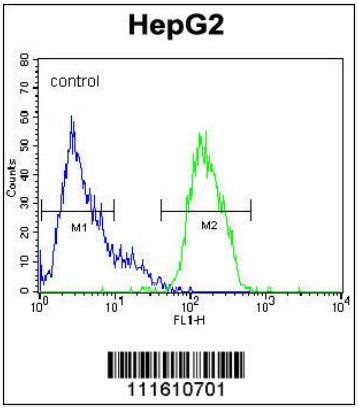
Product References and Citations for anti-MAPK1 antibody	Munshi, H.G., et al., J. Biol. Chem. 279(37):39042-39050 (2004). Mukherjee, S., et al., Infect. Immun. 72(9):5274-5282 (2004). Lou, Y., et al., Biochem. Biophys. Res. Commun. 321(2):495-501 (2004). Mitsushima, M., et al., J. Biol. Chem. 279(33):34570-34577 (2004). Huang, H.M., et al., Biochem. Biophys. Res. Commun. 320(4):1247-1252 (2004).
Other Notes	Small volumes of anti-MAPK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MAPK1 purchase	MBS9206161 is an antibody targeting MAPK1. Also known as MAPK1 Antibody (Center). Reactive in Human (Predicted Reactivity: Bovine, Mouse, Rat, Xenopus). Host: Rabbit.



Western Blot (WB) of anti-MAPK1 antibody
Western blot analysis of anti-MAPK1 Antibody (Center) Pab (RB11609) in Hela, 293, and HepG2 cell line lysates. MAPK1 Antibody (Center)(arrow) was detected using the purified Pab.



Immunohistochemistry (IHC) of anti-MAPK1 antibody
Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with MAPK1 Antibody (Center) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow Cytometry (FC/FACS) of anti-MAPK1 antibody
MAPK1 Antibody (Center) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MAPK1. It may not necessarily be applicable to this product.

NCBI GI #	66932916
NCBI GeneID	5594
NCBI Accession #	NP_002736.3
NCBI Related Accession #	NP_620407.1
UniProt Primary Accession #	P28482

UniProt Secondary Accession #	A8CZ64
UniProt Related Accession #	P28482
GenBank Nucleotide #	NM_002745.4
NCBI Official Full Name	mitogen-activated protein kinase 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase 1
NCBI Official Symbol	MAPK1
NCBI Official Synonym Symbols	ERK; p38; p40; p41; ERK2; ERT1; ERK-2; MAPK2; PRKM1; PRKM2; P42MAPK; p41mapk; p42-MAPK
UniProt Protein Name	Mitogen-activated protein kinase 1
UniProt Synonym Protein Names	ERT1; Extracellular signal-regulated kinase 2; ERK-2; MAP kinase isoform p42; p42-MAPK; Mitogen-activated protein kinase 2; MAP kinase 2; MAPK 2
Protein Family	GRB2-associated and regulator of MAPK protein
UniProt Gene Name	MAPK1
UniProt Synonym Gene Names	ERK2; PRKM1; PRKM2; MAP kinase 1; MAPK 1; ERK-2; p42-MAPK; MAP kinase 2; MAPK 2
UniProt Entry Name	MK01_HUMAN
NCBI Protein Information	mitogen-activated protein kinase 1
NCBI Summary for MAPK1	This gene encodes 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. One study also suggests that this protein acts as a transcriptional repressor independent of its kinase activity. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene. [provided by RefSeq, Jan 2014]

UniProt Comments for MAPK1	ERK2: a serine/threonine kinase of the GMGC group that plays a critical role in the regulation of cell growth and differentiation. ERK1 (MAPK3) and ERK2 (MAPK1) play central roles in MAPK cascades and are activated by a wide variety of extracellular signals including growth and neurotrophic factors, cytokines, hormones and neurotransmitters. Depending on the cellular context, MAPK cascades mediate diverse biological functions such as cell growth, adhesion, survival and differentiation through the regulation of transcription, translation, cytoskeletal rearrangements. MAPK cascades also plays a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. Activation of MAP kinases occurs through phosphorylation of threonine and tyrosine residues at the sequence T*EY* by upstream MAP kinase kinases, MEK1 and -2. Phosphorylation of both the threonine and tyrosine are required for activity. This phosphorylation causes dramatic conformational changes, which enable full activation and interaction of MAPK1/ERK2 with its substrates. Protein type: Kinase, protein; EC 2.7.11.24; Protein kinase, CMGC; Protein kinase, Ser/Thr (non-receptor); CMGC group; MAPK family; MAPK/ERK subfamily; ERK subfamily Chromosomal Location of Human Ortholog: 22q11.21 Cellular Component: dendrite cytoplasm; Golgi apparatus; focal adhesion; protein complex; mitochondrion; early endosome; perikaryon; pseudopodium; caveola; cytosol; microtubule cytoskeleton; nucleoplasm; cytoskeleton; axon; cytoplasm; late endosome; microtubule organizing center; nucleus Molecular Function: RNA polymerase subunit kinase activity; MAP kinase activity; protein serine/threonine kinase activity; protein binding; DNA binding; phosphotyrosine binding; mitogen-activated protein kinase kinase kinase binding; transcription factor binding; ATP binding; phosphatase binding Biological Process: nerve growth factor receptor signaling pathway; viral reproduction; activation of MAPKK activity; activation of MAPK activity; response to toxin; positive regulation of transcription, DNA-dependent; stress-activated MAPK cascade; toll-like receptor 3 signaling pathway; sensory perception of pain; protein amino acid phosphorylation; T cell receptor signaling pathway; toll-like receptor 5 signaling pathway; B cell receptor signaling pathway; regulation of transcription factor activity; small GTPase mediated signal transduction; toll-like receptor 4 signaling pathway; platelet activation; fibroblast growth factor receptor signaling pathway; transcription, DNA-dependent; toll-like receptor 2 signaling pathway; regulation of stress-activated MAPK cascade; nuclear translocation of MAPK; organ morphogenesis; response to estrogen stimulus; toll-like receptor 9 signaling pathway; regulation of cytoskeleton organization and biogenesis; axon guidance; positive regulation of translation; apoptosis; regulation of protein stability; signal transduction; chemotaxis; toll-like receptor 10 signaling pathway; synaptic transmission; response to exogenous dsRNA; positive regulation of cell proliferation; lipopolysaccharide-mediated signaling pathway; response to stress; epidermal growth factor receptor signaling pathway; MyD88-independent toll-like receptor signaling pathway; MAPKKK cascade; peptidyl-threonine phosphorylation; mammary gland epithelial cell proliferation; cell cycle; MyD88-dependent toll-like receptor signaling pathway; peptidyl-serine phosphorylation; negative regulation of cell differentiation; cytosine metabolic process; Ras protein signal transduction; toll-like receptor signaling pathway; insulin receptor signaling pathway; innate immune response; blood coagulation; vascular endothelial growth factor receptor signaling pathway; response to DNA damage stimulus; positive regulation of cell migration
Research Articles on MAPK1	**1.** Data suggest that extracellular signal-regulated kinases ERK1/2 signaling can cross-interact with the transforming growth factor beta2/Smad2/3 and the Jagged-1/Notch-3 signaling in retinal pigment epithelium cells epithelial-mesenchymal transition.
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