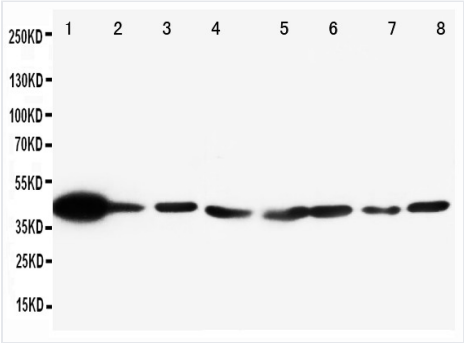
MAPK1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ERK2 (MAPK1), Polyclonal Antibody
Full Product Name	Anti-ERK2 antibody
Product Gene Name	anti-MAPK1 antibody
Product Synonym Names	Mitogen-activated protein kinase 1(MAP kinase 1/MAPK 1); mitogen-activated protein kinase 1; ERK 2 antibody; ERK antibody; ERK-2 antibody; ERT 1 antibody; ERT1 antibody; Extracellular Signal Regulated Kinase 2 antibody; Extracellular signal-regulated kinase 2 antibody; MAP kinase 1 antibody; MAP kinase 2 antibody; MAP kinase 2 antibody; MAP kinase isoform p42 antibody; MAPK 1 antibody; MAPK 2 antibody; MAPK 2 antibody; MAPK1 antibody; MAPK2 antibody; Mitogen Activated Protein Kinase 1 antibody; Mitogen Activated Protein Kinase 2 antibody; Mitogen-activated protein kinase 1 antibody; Mitogen-activated protein kinase 2 antibody; MK01_HUMAN antibody; P38 antibody; P40 antibody; P41 antibody; P41MAPK antibody; p42 MAPK antibody; p42-MAPK antibody; P42MAPK antibody; P42MAPK antibody; PRKM 1 antibody; PRKM 2 antibody; PRKM1 antibody; PRKM2 antibody; Protein Tyrosine Kinase ERK2 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized
Purity/Purification	Immunogen affinity purified.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
Molecular Weight	36,432 Da
OMIM	176948
3D Structure	ModBase 3D Structure for P28482
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human ERK2 (348-360aa FEETARFQPGYRS), identical to the related rat and mouse sequences.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-MAPK1 antibody	Western Blot (WB)
Related Product Information for anti-MAPK1 antibody	**Description:** Rabbit IgG polyclonal antibody for Mitogen-activated protein kinase 1(MAPK1) detection. Tested with WB in Human, Mouse, Rat. **Background:** Mitogen-activated protein kinase 1, also known as MAPK1, p42MAPK, and ERK2, is an enzyme which in humans is encoded by the MAPK1 gene. The gene is mapped to 22q11.2. And The protein encoded by this gene is a member of the MAP kinase family. The deduced 360-amino acid human ERK2 protein shares 98% identity with rat Erk2. The MAP kinase ERK2 is widely involved in eukaryotic signal transduction. Upon activation, it translocates to the nucleus of the stimulated cell, where it phosphorylates nuclear targets. Futhermore, the ERK pathway is necessary for experience-dependent plasticity and for long-term potentiation of synaptic transmission in the developing visual cortex. And the MAPK pathway is also involved in responses to NTN1.

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	MBS175411 is an antibody targeting MAPK1. Also known as Anti-ERK2 antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-MAPK1 antibody
Anti-ERK2 antibody, MBS175411, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Lung Tissue LysateLane 3: Rat Placenta Tissue LysateLane 4: HT1080 Cell LysateLane 5: HELA Cell LysateLane 6: MM231 Cell LysateLane 7: RAJI Cell LysateLane 8: COLO320 Cell Lysate

ADDITIONAL DETAILS

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

NCBI GI #	119554
NCBI GeneID	5594
NCBI Accession #	P28482.3
UniProt Primary Accession #	P28482
UniProt Secondary Accession #	A8CZ64
UniProt Related Accession #	P28482
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	Extracellular signal-regulated kinase
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; MAPK 2; MAP kinase 1; MAP kinase 2; MAP kinase isoform p42; protein tyrosine kinase ERK2; mitogen-activated protein kinase 2; extracellular signal-regulated kinase 2

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: EC 2.7.11.24; Protein kinase, Ser/Thr (non-receptor); Kinase, protein; Protein kinase, CMGC; 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; caveola; pseudopodium; cytosol; nucleoplasm; microtubule cytoskeleton; cytoskeleton; axon; late endosome; cytoplasm; 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: viral reproduction; activation of MAPKK activity; nerve growth factor receptor signaling pathway; 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; organ morphogenesis; nuclear translocation of MAPK; 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; insulin receptor signaling pathway; toll-like receptor signaling pathway; innate immune response; vascular endothelial growth factor receptor signaling pathway; blood coagulation; response to DNA damage stimulus; positive regulation of cell migration
Research Articles on MAPK1	**1.** Endogenous or exogenous PGD2 induces CRTH2-dependent apoptosis in human differentiated osteoclasts; beta-arrestin-1, ERK1/2, and Akt, but not IKK2/NF-kappaB are probably implicated in the signaling pathways.
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