

Rabbit anti-Human ERK2 Polyclonal Antibody | anti-MAPK1 antibody

Anti-ERK2 Antibody, Rabbit Polyclonal

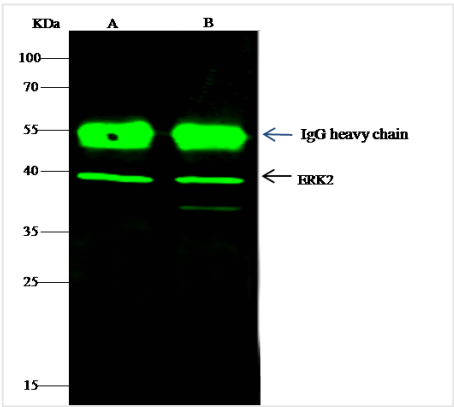
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA254188	Rabbit	Human	Immunoprecipitation, ELISA, Western Blot

PRODUCT SYNONYMS

ERK2; Polyclonal Antibody; Anti-ERK2 Antibody; Rabbit Polyclonal; ERK2/MAPK1/MAPK2 Antibody; Rabbit PAb; Antigen Affinity Purified; mitogen-activated protein kinase 1; Anti-ERK Antibody; Anti-ERK-2 Antibody; Anti-ERT1 Antibody; Anti-MAPK2 Antibody; Anti-p38 Antibody; Anti-p40 Antibody; Anti-p41 Antibody; Anti-p41mapk Antibody; Anti-p42-MAPK Antibody; Anti-P42MAPK Antibody; Anti-PRKM1 Antibody; Anti-PRKM2 Antibody; anti-MAPK1 antibody

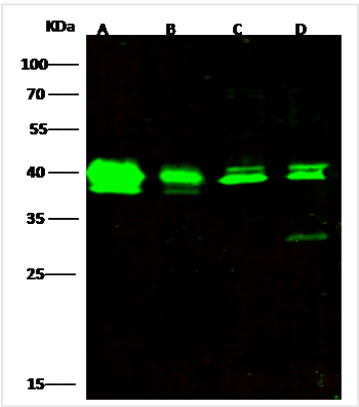
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human ERK2/MAPK1/MAPK2
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-MAPK1 antibody	IP (Immunoprecipitation), ELISA, WB (Western Blot)
Immunogen	Recombinant Human ERK2/MAPK1/MAPK2 Protein
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with purified, recombinant Human ERK2/MAPK1/MAPK2 (rh ERK2/MAPK1/MAPK2). ERK2/MAPK1/MAPK2 specific IgG was purified by Human ERK2/MAPK1/MAPK2 affinity chromatography.
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.



IP (Immunoprecipitation)

ERK2 was immunoprecipitated using: Lane A: 0.5 mg HepG2 Whole Cell Lysate Lane B: 0.5 mg HeLa Whole Cell Lysate 4 uL anti-ERK2 rabbit polyclonal antibody and 60 ug of Immunomagnetic beads Protein G. Primary antibody: Anti-ERK2 rabbit polyclonal antibody, at 1:100 dilution Secondary antibody: DyLight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution Developed using the odyssey technique. Performed under reducing conditions. Predicted band size: 41 kDa Observed band size: 41 kDa



WB (Western Blot)

Anti-ERK2 rabbit polyclonal antibody at 1:500 dilution Lane A: HepG2 Whole Cell Lysate Lane B: HeLa Whole Cell Lysate Lane C: Jurkat Whole Cell Lysate Lane D: MCF7 Whole Cell Lysate Lysates/proteins at 30 ug per lane. Secondary Goat Anti- Rabbit IgG H&L (DyLight 800) at 1/10000 dilution. Developed using the Odyssey technique. Performed under reducing conditions. Predicted band size: 41 kDa Observed band size: 40 kDa (We are unsure as to the identity of these extra bands).

ADDITIONAL INFORMATION

Related Product Information for anti-MAPK1 antibody	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. ERK is a versatile protein kinase that regulates many cellular functions. Growing evidence suggests that extracellular signal-regulated protein kinase 1/2 (ERK1/2) plays a crucial role in promoting cell death in a variety of neuronal systems, including neurodegenerative diseases. It is believed that the magnitude and the duration of ERK1/2 activity determine its cellular function. Activation of ERK1/2 is implicated in the pathophysiology of spinal cord injury (SCI). ERK2 signaling is a novel target associated with the deleterious consequences of spinal injury. ERK-2, also known as mitogen-activated protein kinase 1 (MAPK1), is a member of the protein kinase superfamily and MAP kinase subfamily. MKP-3 is a dual-specificity phosphatase exclusively specific to MAPK1 for its substrate recognition and dephosphorylating activity. The activation of MAPK1 requires its phosphorylation by upstream kinases. Upon activation, MAPK1 translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. MAPK1 is involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating some transcription factors such as ELK1. MAPK1 acts as a transcriptional repressor that represses the expression of interferon gamma-induced genes. Transcriptional activity is independent of kinase activity. The nuclear-cytoplasmic distribution of ERK2 is regulated in response to various stimuli and changes in a cell context. Furthermore, the nuclear flux of ERK2 occurs by several energy- and carrier-dependent and -independent mechanisms. ERK2 has been shown to translocate into and out of the nucleus by facilitated diffusion through the nuclear pore, interacting directly with proteins within the nuclear pore complex, as well as by karyopherin-mediated transport. ERK2 interacts with the PDE4 catalytic unit by binding to a KIM (kinase interaction motif) docking site located on an exposed beta-hairpin loop and an FQF (Phe-Gln-Phe) specificity site located on an exposed alpha-helix. These flank a site that allows phosphorylation by ERK, the functional outcome of which is orchestrated by the N-terminal UCR1/2 (upstream conserved region 1 and 2) modules.
Product Categories/Family for anti-MAPK1 antibody	Cancer Drug Targets; Death Receptor Signaling
References	Houslay MD, et al. (2003) The role of ERK2 docking and phosphorylation of PDE4 cAMP phosphodiesterase isoforms in mediating cross-talk between the cAMP and ERK signalling pathways. <i>Biochem Soc Trans.</i> 31(Pt 6): 1186-90. Jivan A, et al. (2010) Reconstitution of the Nuclear Transport of the MAP Kinase ERK2. <i>Methods Mol Biol.</i> 661: 273-85. Yu CG, et al. (2010) Involvement of ERK2 in traumatic spinal cord injury. <i>J Neurochem.</i> 113(1): 131-42. Subramaniam S, et al. (2010) ERK and cell death: ERK1/2 in neuronal death. <i>FEBS J.</i> 277(1): 22-9.

NCBI AND UNIPROT INFORMATION

NCBI GI #	66932916
NCBI GeneID	5594
NCBI Accession #	NP_002736.3
NCBI GenBank Nucleotide #	NM_002745.4
UniProt Accession #	P28482
Molecular Weight	41,390 Da
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; MAPK2; PRKM1; PRKM2; P42MAPK; p41mapk
NCBI Protein Information	mitogen-activated protein kinase 1; ERK-2; MAPK 2; p42-MAPK; MAP kinase 1; MAP kinase 2; MAP kinase isoform p42; protein tyrosine kinase ERK2; mitogen-activated protein kinase 2; extracellular signal-regulated kinase 2
UniProt Protein Name	Mitogen-activated protein kinase 1
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

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/erk2-antibody-immunoprecipitation-western-blot-elisa/254188>