

**MAPK3 / ERK1 Antibody (aa350-400)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS14592****Specification**

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**MAPK3 / ERK1 Antibody (aa350-400) - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P27361</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A

**MAPK3 / ERK1 Antibody (aa350-400) - Additional Information****Gene ID** 5595**Other Names**

Mitogen-activated protein kinase 3, MAP kinase 3, MAPK 3, 2.7.11.24, ERT2, Extracellular signal-regulated kinase 1, ERK-1, Insulin-stimulated MAP2 kinase, MAP kinase isoform p44, p44-MAPK, Microtubule-associated protein 2 kinase, p44-ERK1, MAPK3, ERK1, PRKM3

**Target/Specificity**

KLH-conjugated synthetic peptide corresponding to a portion of human ERK1 between amino acids 350-400.

**Reconstitution & Storage**

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

**Precautions**

MAPK3 / ERK1 Antibody (aa350-400) is for research use only and not for use in diagnostic or therapeutic procedures.

**MAPK3 / ERK1 Antibody (aa350-400) - Protein Information****Name** MAPK3**Synonyms** ERK1, PRKM3**Function**

Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway (PubMed:<a href="http://www.uniprot.org/citations/34497368" target="\_blank">34497368</a>). MAPK1/ERK2 and MAPK3/ERK1 are the 2 MAPKs which play an important role in the MAPK/ERK cascade. They participate also in a signaling cascade initiated by activated KIT and KITLG/SCF. Depending on the cellular context, the MAPK/ERK cascade mediates diverse biological functions such as cell growth, adhesion, survival and differentiation through the

regulation of transcription, translation, cytoskeletal rearrangements. The MAPK/ERK cascade also plays a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. About 160 substrates have already been discovered for ERKs. Many of these substrates are localized in the nucleus, and seem to participate in the regulation of transcription upon stimulation. However, other substrates are found in the cytosol as well as in other cellular organelles, and those are responsible for processes such as translation, mitosis and apoptosis. Moreover, the MAPK/ERK cascade is also involved in the regulation of the 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. The substrates include transcription factors (such as ATF2, BCL6, ELK1, ERF, FOS, HSF4 or SPZ1), cytoskeletal elements (such as CANX, CTTN, GJA1, MAP2, MAPT, PXN, SORBS3 or STMN1), regulators of apoptosis (such as BAD, BTG2, CASP9, DAPK1, IER3, MCL1 or PPARG), regulators of translation (such as EIF4EBP1) and a variety of other signaling-related molecules (like ARHGEF2, DEPTOR, FRS2 or GRB10) (PubMed:<a href="http://www.uniprot.org/citations/35216969" target="\_blank">35216969</a>). Protein kinases (such as RAF1, RPS6KA1/RSK1, RPS6KA3/RSK2, RPS6KA2/RSK3, RPS6KA6/RSK4, SYK, MKNK1/MNK1, MKNK2/MNK2, RPS6KA5/MSK1, RPS6KA4/MSK2, MAPKAPK3 or MAPKAPK5) and phosphatases (such as DUSP1, DUSP4, DUSP6 or DUSP16) are other substrates which enable the propagation the MAPK/ERK signal to additional cytosolic and nuclear targets, thereby extending the specificity of the cascade.

#### Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P21708}. Nucleus. Membrane, caveola {ECO:0000250|UniProtKB:P21708}. Cell junction, focal adhesion {ECO:0000250|UniProtKB:Q63844} Note=Autophosphorylation at Thr-207 promotes nuclear localization (PubMed:19060905). PEA15-binding redirects the biological outcome of MAPK3 kinase-signaling by sequestering MAPK3 into the cytoplasm (By similarity). {ECO:0000250|UniProtKB:Q63844, ECO:0000269|PubMed:19060905}

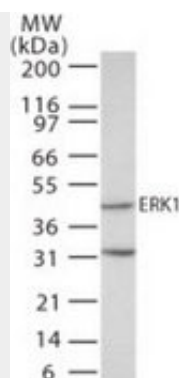
#### MAPK3 / ERK1 Antibody (aa350-400) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### MAPK3 / ERK1 Antibody (aa350-400) - Images





Western blot of ERK1 in human A431 cell lysate using antibody at 1 ug/ml.

### **MAPK3 / ERK1 Antibody (aa350-400) - Background**

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### **MAPK3 / ERK1 Antibody (aa350-400) - References**

- Charest D.L.,et al.Mol. Cell. Biol. 13:4679-4690(1993).  
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