

Rabbit Anti-ERK1 + 2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52230**Specification****Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	P63085
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41276

Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Additional Information**Gene ID** 26413**Other Names**

ERK; Erk2; MAPK2; PRKM2; Prkm1; C78273; p41mapk; p42mapk; AA47128; AU18647; 93612K14Rik; 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; Mapk

Dilution

WB~1:100~1:500<br \>IHC-P~1:100~1:500

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Protein Information**Name** Mapk1 {ECO:0000312|MGI:MGI:1346858}**Synonyms** Erk2, Mapk, Prkm1**Function**

Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. 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 FXR1) and a variety of other signaling-related molecules (like ARHGEF2, DCC, FRS2 or GRB10). 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. Mediates phosphorylation of TPR in response to EGF stimulation. May play a role in the spindle assembly checkpoint. Phosphorylates PML and promotes its interaction with PIN1, leading to PML degradation. Phosphorylates CDK2AP2 (By similarity).

Cellular Location

Cytoplasm, cytoskeleton, spindle. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm. Membrane, caveola {ECO:0000250|UniProtKB:P63086}. Cell junction, focal adhesion. Note=Associated with the spindle during prometaphase and metaphase (By similarity). PEA15-binding and phosphorylated DAPK1 promote its cytoplasmic retention. Phosphorylation at Ser-244 and Ser-246 as well as autophosphorylation at Thr-188 promote nuclear localization (By similarity). Localization to focal adhesions is stimulated by EGF (PubMed:15923189). {ECO:0000250, ECO:0000269|PubMed:15923189}

Tissue Location

Widely expressed.

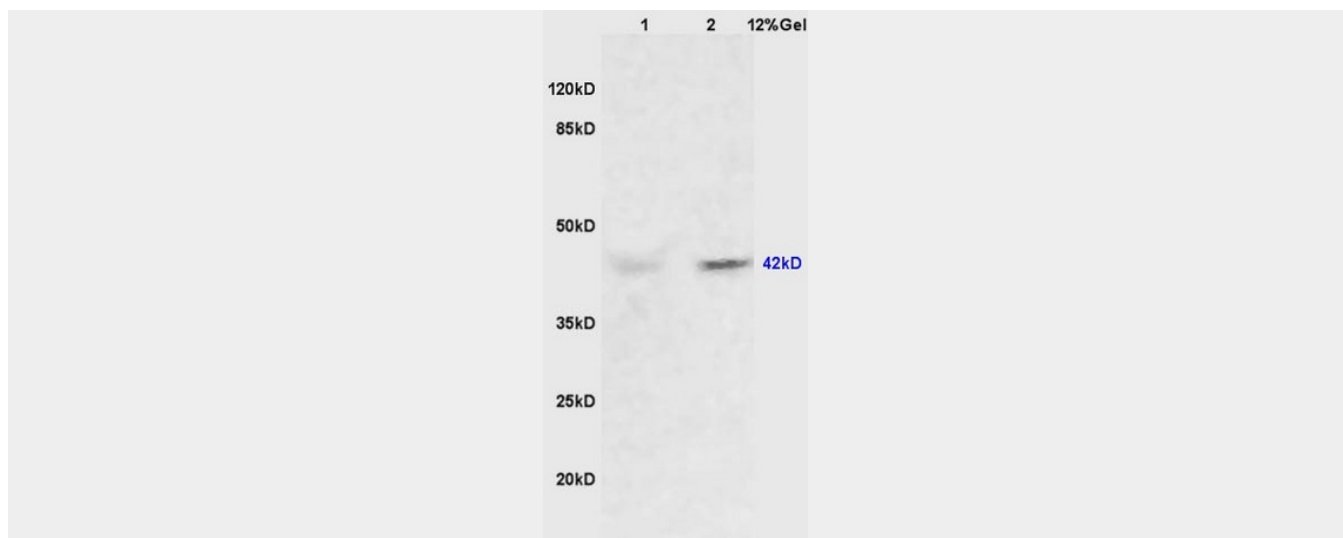
Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Protocols

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

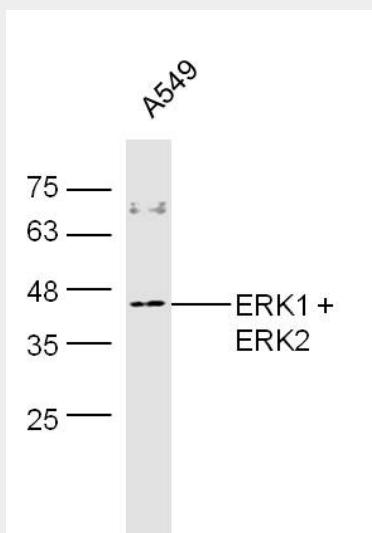
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Images

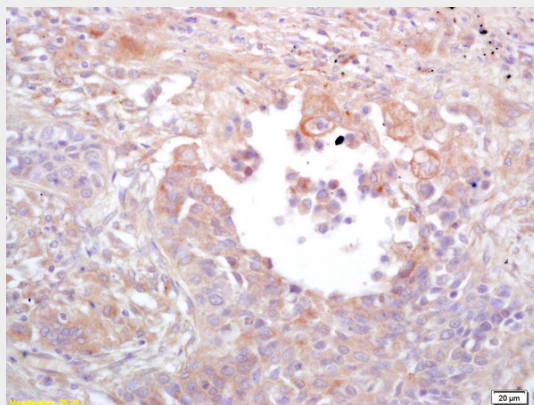




Lane 1: mouse heart lysates Lane 2: mouse brain lysates probed with Anti ERK1/2(p42/p42 MAPK) Polyclonal Antibody, Unconjugated (AP52230) at 1:200 in 4°C. Followed by conjugation to secondary antibody at 1:3000 90min in 37°C. Predicted band 42kD. Observed band size: 42kD.



A549 cell lysates probed with Rabbit Anti-ERK1 + 2 Polyclonal Antibody, Unconjugated at 1:500 for 90 min at 37°C.



Formalin-fixed and paraffin embedded human lung carcinoma labeled with Rabbit Anti ERK1/2(p44/42 MAPK) Polyclonal Antibody, Unconjugated (AP52230) at 1:200 followed by

conjugation to the secondary antibody and DAB staining

Rabbit Anti-ERK1 + 2 Polyclonal Antibody - Background

The protein encoded by this gene is a member of the MAPkinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act in a signaling cascade that regulates various cellular processes such as proliferation, differentiation, and cell cycle progression in response to a variety of extracellular signals. This kinase is activated by upstream kinases, resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Alternatively spliced transcript variants encoding different protein isoforms have been described. [provided by RefSeq, Jul 2008].