

**Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated**  
**ERK2 Internal Antibody HRP**  
**Catalog # ASR4310****Specification****Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - Product Information**

Host	<b>Mouse</b>
Conjugate	<b>Peroxidase (Horseradish)</b>
Target Species	<b>Human</b>
Reactivity	<b>Rat, Human, Mouse</b>
Clonality	<b>Monoclonal</b>
Application	<b>WB, E, I, LCI</b>
Application Note	<b>Anti-ERK 2 (MOUSE) HRP conjugated antibody is suitable for use in ELISA and Western Blotting. Specific conditions of reactivity should be optimized by the end user. Expect a band of approximately 41 kDa.</b>
Physical State	<b>Lyophilized</b>
Buffer	<b>0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2</b>
Immunogen	<b>Anti-ERK2 Monoclonal Antibody was produced in mice by repeated immunizations with synthetic peptide corresponding to amino acid residues near an internal region of ERK2 conjugated to KLH.</b>
Reconstitution Volume	<b>100 µL</b>
Reconstitution Buffer	<b>Restore with deionized water (or equivalent)</b>
Stabilizer	<b>10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free</b>
Preservative	<b>0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!</b>

**Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - Additional Information****Gene ID 5594****Purity**

This Peroxidase conjugated protein A purified mouse monoclonal antibody reacts specifically with human ERK2. Anti-ERK2 is purified from tissue culture supernatant by protein A purification. Cross reactivity is expected to occur with human, mouse, and rat based on sequence identity of the peptide immunogen. This antibody does not react with the ERK1 isoform.

**Storage Condition**

Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

**Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - Protein Information**

**Name** MAPK1 ([HGNC:6871](#))

**Synonyms** ERK2, PRKM1, PRKM2

**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 {ECO:0000250|UniProtKB:P63085}. Note=Associated with the spindle during prometaphase and metaphase (By similarity). PEA15-binding and phosphorylated DAPK1 promote its cytoplasmic retention. Phosphorylation at Ser- 246 and Ser-248 as well as autophosphorylation at Thr-190 promote nuclear localization.

**Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - 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](#)

### **Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - Images**

### **Anti-ERK2 (MOUSE) Monoclonal Antibody Peroxidase Conjugated - Background**

ERK2 antibodies detect the ERK2 isoform. Mitogen activated protein kinase 1, also known as MAPK1, ERK, or ERK2, is an integral component of the MAP kinase cascade that regulates cell growth and differentiation. ERK1 and ERK2 are activated by MEK1 and MEK2 in the B-raf signaling pathway resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Human ERK1 and ERK2 are 84% identical in sequence and share common functionality in cells. Anti-ERK2 antibody is ideal for investigators involved in Neuroscience, Cell Signaling and Cancer Research.