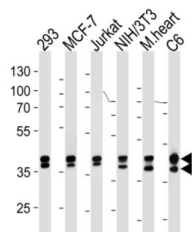


# Mitogen-Activated Protein Kinase 1 and 3 / ERK1/2 (MAPK1/MAPK3) Antibody

Catalogue No.: abx034789



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 the MAPK/ERK cascade plays also 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, 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.

**Target:** Mitogen-Activated Protein Kinase 1 and 3 / ERK1/2 (MAPK1/MAPK3)

**Clonality:** Monoclonal

**Reactivity:** Human, Mouse

**Tested Applications:** ELISA, WB, FCM

**Host:** Mouse

**Recommended dilutions:** WB: 1/4000, FCM: 1/25. Optimal dilutions/concentrations should be determined by the end user.

**Conjugation:** Unconjugated

# Datasheet

Version: 3.0.0

Revision date: 21 Jun 2025



<b>Immunogen:</b>	Purified His-tagged Erk1/2 protein
<b>Isotype:</b>	IgG <sub>2a</sub>
<b>Form:</b>	Liquid
<b>Purification:</b>	Purified through a protein G column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS.
<b>Storage:</b>	Aliquot and store at -20°C. Avoid repeated freeze/thaw cycles.
<b>UniProt Primary AC:</b>	P27361 ( <a href="#">UniProt</a> , <a href="#">ExPASy</a> ) P28482 ( <a href="#">UniProt</a> , <a href="#">ExPASy</a> )
<b>Molecular Weight:</b>	Calculated MW: 43.1 kDa
<b>Buffer:</b>	PBS containing 0.09% sodium azide.
<b>Note:</b>	THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.

For Reference Only