

ERK1 (C-terminal Region)

Cat. # EM2331

Host Mouse Monoclonal IgG1

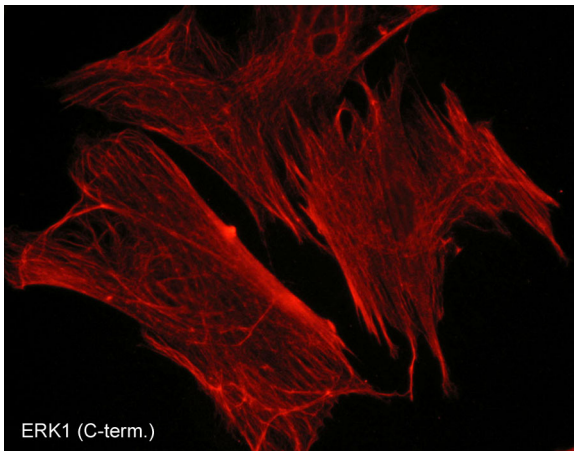
Size 100 µl

Background:

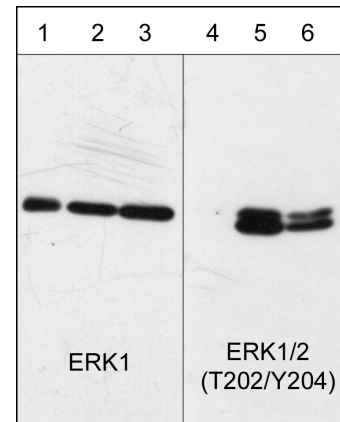
Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs such as cell proliferation, differentiation, motility, and death. The ERK1/2 (p44/42) signaling pathway can be activated in response to a diverse range of extracellular stimuli including mitogens, growth factors, and cytokines. Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK), a MAP kinase kinase (MAPKK), and a MAP kinase (MAPK). Multiple ERK1/2 MAPKKs have been identified, including members of the Raf family as well as Mos and Tpl2/Cot. MEK1 and MEK2 are the primary MAPKKs in this pathway. MEK1 and MEK2 activate ERK1 and ERK2 through phosphorylation of activation loop residues Thr-202/Tyr-204 and Thr-185/Tyr-187, respectively. ERK1/2 are negatively regulated by a family of dual-specificity (Thr/Tyr) MAPK phosphatases. Several downstream targets of ERK1/2 have been identified, including p90RSK and the transcription factor Elk-1.

References

- Roux, P.P. & Blenis, J. (2004) *Microbiol Mol Biol Rev* 68:320.
 Murphy, L.O. & Blenis, J. (2006) *Trends Biochem Sci* 31:268.
 Owens, D.M. & Keyse, S.M. (2007) *Oncogene* 26:3203.



Immunocytochemical labeling of ERK1 in paraformaldehyde-fixed and NP-40-permeabilized rabbit spleen fibroblasts. The cells were labeled with mouse monoclonal ERK1 (C-terminal region) and detected using appropriate secondary antibodies conjugated to Cy3.



Western blot analysis of human A431 epithelial cells untreated (lanes 1 & 4) or treated with 100 nM calyculin A for 30 min. (lanes 2 & 5) or 100 ng/ml EGF for 60 min. (lanes 3 & 6). The blots were probed with anti-ERK1 (C-terminal region) (lanes 1, 2, & 3) or anti-ERK1/2 (Thr-202/Tyr-204) (lanes 4, 5, & 6).

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Host Mouse Monoclonal IgG1

Size 100 µl

Immunogen:

Clone (M233) was generated from a recombinant human ERK1 protein that included amino acids residues in the C-terminal region. This sequence is conserved in rat and mouse ERK1, and has low homology to ERK2, as well as other ERK family members.

Buffer and Storage:

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

Applications:

WB 1:1000 IHC 1:100

ELISA 1:2000

ICC 1:100

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

The antibody detects a 44 kDa* protein corresponding to ERK1 on SDS-PAGE immunoblots of human A431 epithelial cells. It does not detect ERK2.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

EM2061 ERK1/2 (Thr-202/Tyr-204), phospho-specific Mouse Monoclonal

PM1381 p38α MAP Kinase (C-terminal) Mouse Monoclonal

PM1391 p38 MAP Kinase (Thr-180/Tyr-182), phospho-specific Mouse

PP3411 p38α MAP Kinase (Tyr-323), phospho-specific Rabbit Polyclonal

PK6140 p38 MAPK Phospho-Regulation Antibody Sampler Kit

MK6050 MAP Kinase Activation Antibody Sampler Kit

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