10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody

Catalog # AN1784

Specification

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody - Product Information

Application	**WB**
Primary Accession	P28482
Reactivity	**Bovine**
Host	**Mouse**
Clonality	**Mouse Monoclonal**
Isotype	**IgG1**
Calculated MW	**41390**

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody - Additional Information

Gene ID	**5594**

Other Names
ERK, p42, p44, MAPK

Target/Specificity
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 MAPKKKs 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.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody - Protocols

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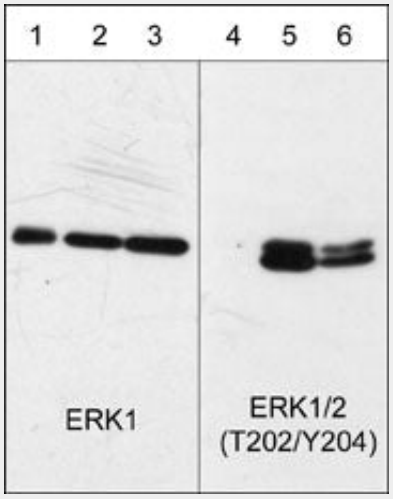
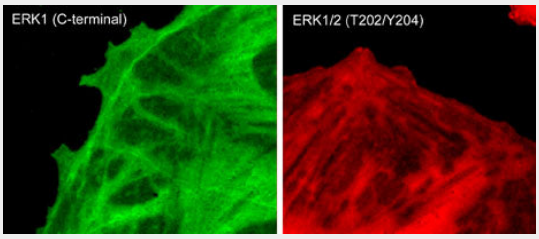
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody - Images



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).



Immunocytochemical labeling of phosphorylated ERK1 in paraformaldehyde-fixed and NP-40-permeabilized rat A7r5 cells treated with calyculin A. The fixed cells were labeled with mouse monoclonal antibodies to anti-ERK1 (EM2331) and anti-ERK1/2 (Thr-202/Tyr-204) (EM2061). The antibodies were detected using Goat anti-Mouse secondary antibodies conjugated to DyLight® 488 (left) and DyLight® 594 (right).

Anti-ERK1 (Thr-202/Tyr-204) [conserved], Phosphospecific Antibody - Background

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MAPKKKs 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.