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# Anti-ERK1(T207)/ERK2(T188) [conserved], Phosphospecific Antibody

Catalog # AN1786

## Product Information

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|---|---|
| **Application** | WB |
| **Primary Accession** | P63085 |
| **Reactivity** | Rat |
| **Host** | Rabbit |
| **Clonality** | Rabbit Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 41276 |

## Additional Information

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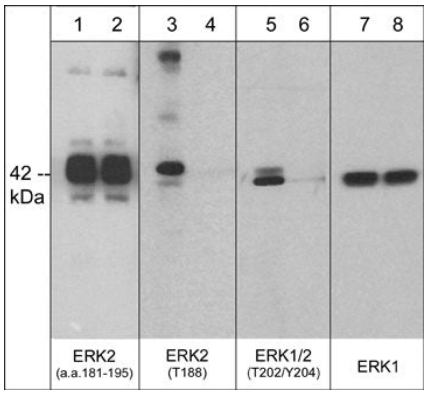
| **Gene ID** | 26413 |
| **Other Names** | ERK, p42, p44, MAPK |
| **Target/Specificity** | Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs such as cell proliferation, differentiation, motility, and death. 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. |
| **Dilution** | WB~~1:1000 |
| **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(T207)/ERK2(T188) [conserved], Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |
| **Shipping** | Blue Ice |

## 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 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.

## Images




Western blot analysis of human A431 epithelial cells treated with 100 nM calyculin A for 30 min. (lanes 1, 3, 5, & 7) then the blot was treated with lambda phosphatase (lanes 2, 4, 6, & 8). The blots were probed with polyclonal anti-ERK2 (a.a. 181-195) (lanes 1 & 2), anti-ERK2 (Thr-188) (lanes 3 & 4), anti-ERK1/2 (Thr-202/Tyr-204) (lanes 5 & 6), or monoclonal anti-ERK1 (C-terminal region) (lanes 7 & 8).