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

Catalog # AN1786

Product Information

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

Additional Information

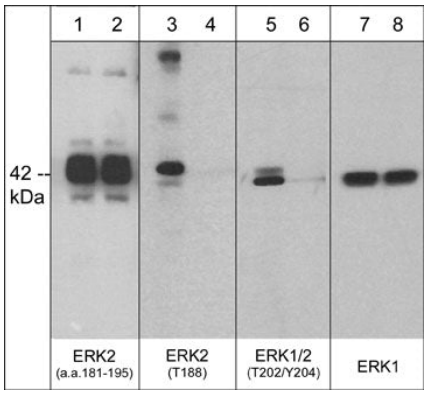
Gene ID	26413
Other Names	ERK, p42, p44, MAPK
Target/Specificity	Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs such as cell proliferation, differentiation, motility, and death. The ERK1/2 (p44/42) signaling 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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.