

#5736 Store at -20°C

p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb (Sepharose® Bead Conjugate)



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Applications: IP	Reactivity: H M R Hm Mk Mi Dm Z B Dg Pg Ce	Sensitivity: Endogenous	MW (kDa): 42, 44	Source/Isotype: Rabbit IgG	UniProt ID: #P27361, #P28482	Entrez-Gene Id: 5595, 5594
Product Usage Information	Application Immunoprecipitation		Dilution 1:20			
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at –20°C. Do not aliquot the antibodies.					
Specificity / Sensitivity	p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb (Sepharose® Bead Conjugate) detects endogenous levels of total p44/42 MAPK (Erk1/2) protein. The antibody does not cross-react with JNK/SAPK or p38 MAP kinase. The addition of 0.1% SDS to the immunoprecipitation reaction may improve pulldown efficiency. Under some conditions this conjugate may immunoprecipitate p44/Erk1 preferentially over p42/Erk2.					
Species predicted to react based on 100% sequence homology:	Chicken					
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the C-terminus of rat p44 MAP kinase.					
Product Description	This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose® beads. p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb (Sepharose® Bead Conjugate) is useful for immunoprecipitation assays. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb #4695.					

MW (kDa)

42, 44

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 p44/42 MAPK (Erk1/2) signaling pathway can be activated in response to a diverse range of extracellular stimuli, including mitogens, growth factors, and cytokines (1-3), and research investigators consider it an important target in the diagnosis and treatment of cancer (4). Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK or MAP3K), a MAP kinase kinase (MAPKK or MAP2K), and a MAP kinase (MAPK). Multiple p44/42 MAP3Ks 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 (5,6). MEK1 and MEK2 activate p44 and p42 through phosphorylation of activation loop residues Thr202/Tyr204 and Thr185/Tyr187, respectively. Several downstream targets of p44/42 have been identified, including p90RSK (7) and the transcription factor Elk-1 (8,9). p44/42 are negatively regulated by a family of dual-specificity (Thr/Tyr) MAPK phosphatases, known as DUSPs or MKPs (10), along with MEK inhibitors, such as U0126 and PD98059.

Background References

1. Roux, P.P. and Blenis, J. (2004) *Microbiol Mol Biol Rev* 68, 320-44.
2. Baccarini, M. (2005) *FEBS Lett* 579, 3271-7.
3. Meloche, S. and Pouyssegur, J. (2007) *Oncogene* 26, 3227-39.
4. Roberts, P.J. and Der, C.J. (2007) *Oncogene* 26, 3291-310.
5. Rubinfeld, H. and Seger, R. (2005) *Mol Biotechnol* 31, 151-74.
6. Murphy, L.O. and Blenis, J. (2006) *Trends Biochem Sci* 31, 268-75.
7. Dalby, K.N. et al. (1998) *J Biol Chem* 273, 1496-505.
8. Marais, R. et al. (1993) *Cell* 73, 381-93.
9. Kortenjann, M. et al. (1994) *Mol Cell Biol* 14, 4815-24.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IP: Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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