Product Information Sheet

Polyclonal Anti- Mitogen-activated protein kinase 1, ***MAPK1/ERK2***

Catalogue No. PA1310

Lot No. 09L01

Ig type rabbit IgG

Size 100µg/vial

Specificity

Human.

No cross reactivity with other proteins.

Recommended application

Western blot

To reorder contact us at:

Antagene, Inc.

Toll Free: 1(866)964-2589

email: Info@antageneinc.com

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminal of human ERK2, identical to the related rat and mouse sequence.

Purity

Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	1µg/ml	Hu	-	-
IHC-P	-	-	-	-
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

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BACKGROUND

Mitogen-activated protein kinase 1, also known as MAPK1, p42MAPK, and ERK2, is an enzyme which in humans is encoded by the MAPK1 gene.[1] The gene is mapped to 22q11.2.[2] And The protein encoded by this gene is a member of the MAP kinase family. The deduced 360-amino acid human ERK2 protein shares 98% identity with rat Erk2.[3] The MAP kinase ERK2 is widely involved in eukaryotic signal transduction. Upon activation, it translocates to the nucleus of the stimulated cell, where it phosphorylates nuclear targets.[4] Futhermore, the ERK pathway is necessary for experience-dependent plasticity and for long-term potentiation of synaptic transmission in the developing visual cortex.[5] And the MAPK pathway is also involved in responses to NTN1.[6]

REFERENCE

1. Owaki H, Makar R, Boulton TG, Cobb MH, Geppert TD (February 1992). "Extracellular signal-regulated kinases in T cells: characterization of human ERK1 and ERK2 cDNAs". *Biochem. Biophys. Res. Commun.* 182 (3): 1416–22.
2. Li, L.; Wysk, M.; Gonzalez, F. A.; Davis, R. J. : Genomic loci of human mitogen-activated protein kinases. *Oncogene* 9: 647-649, 1994.
3. Owaki, H.; Makar, R.; Boulton, T. G.; Cobb, M. H.; Geppert, T. D. : Extracellular signal-regulated kinases in T cells: characterization of human ERK1 and ERK2 cDNAs. *Biochem. Biophys. Res. Commun.* 182: 1416-1422, 1992.
4. Khokhlatchev, A. V.; Canagarajah, B.; Wilsbacher, J.; Robinson, M.; Atkinson, M.; Goldsmith, E.; Cobb, M. H. : Phosphorylation of the MAP kinase ERK2 promotes its homodimerization and nuclear translocation. *Cell* 93: 605-615, 1998.
5. Di Cristo, G.; Berardi, N.; Cancedda, L.; Pizzorusso, T.; Putignano, E.; Ratto, G. M.; Maffei, L. : Requirement of ERK activation for visual cortical plasticity. *Science* 292: 2337-2340, 2001.
6. Forcet, C.; Stein, E.; Pays, L.; Corset, V.; Llambi, F.; Tessier-Lavigne, M.; Mehlen, P. : Netrin-1-mediated axon outgrowth requires deleted in colorectal cancer-dependent MAPK activation. *Nature* 417: 443-447, 2002.

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