Anti-Erk2 (RABBIT) Antibody - 100-401-218

Code: 100-401-218 **Size:** 100 µL

Product Description: Anti-Erk2 (RABBIT) Antibody - 100-401-218

Concentration: 85 mg/mL by Refractometry

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	MAPK1
Species Reactivity	human
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	MAP kinase 1, MAP kinase 2, p42-MAPK
Application Note	This antiserum was tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a predominant band approximately 42 kDa in size corresponding to p42 MAP Kinase (ERK2) by western blotting in the appropriate cell lysate or extract. p42 MAP Kinase (ERK2) is a ubiquitous protein kinase target for Ras and Raf. The following cell lines have been assayed by immunoblot and were found to be positive for p42 MAP Kinase (ERK2) using this reagent: U937, HeLa, NIH-3T3, RAW 264.7, LNCaP and HEK whole cell lysates.
Background	Cell proliferation is regulated in several contexts, for example during development, tissue differentiation, wound healing and immune responses. In mammalian cells, proliferative signals lead to the activation of a protein kinase cascade, resulting in the phosphorylation of two closely related Mitogen-Activated Protein Kinases (MAPK's) ERK1 and ERK2 of 44 kDa and 42 kDa, respectively. When activated, ERK's form dimers that translocate to the nucleus where they phosphorylate several classes of transcription factors which are involved in the up-regulation of immediate early genes. As such, ERK1 and ERK2 represent a paradigm for a growing family of proline-directed protein kinases that mediate entry, progression and exit from the cell cycle in diverse eukaryotic cells. These enzymes function within highly conserved cascade of sequentially activating protein kinases that transduce signals from diverse extracellular stimuli. Alternative splice transcript variants encoding different protein isoforms have been described. ERK1 and ERK2 are phosphorylated within the activation loop on both a Threonine and a Tyrosine residue (within a Thr-Glu-Tyr motif) by MEKs (MAPK/ERK kinases), thereby greatly elevating the activity of ERK1&2. In vertebrates the mitogen-induced sequential activation of the kinases Raf1->Mek1->Erk2->Rsk occurs via the G-protein Ras.
Purity And Specificity	This antiserum is directed against human p42 MAP Kinase (ERK2) protein and is useful in determining its presence by immunoblotting. No reactivity is observed against p44 MAP Kinase (ERK1). Cross reactivity is expected with p44 MAP Kinase (ERK1) proteins from human and mouse sources. Reactivity to rat tissues is also anticipated due to high sequence homology. Reactivity against homologues from other sources is not known.
Assay Dilutions	User Optimized
ELISA	1:2,000 to 1:10,000
WESTERN BLOT	1:1,000-1:,2000
OTHER ASSAYS	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	Anti-Erk2 antibody was prepared by repeated immunizations with an Erk2 containing fusion protein. The epitope maps near the carboxy-terminus of human p42 MAP Kinase (ERK2) protein. The epitope is identical to the corresponding sequence in mouse and differs from the rat sequence by a single, conservative amino acid substitution.
General Reference	Pelech, SL and Charest, DL (1995) MAP kinase-dependent pathways in cell cycle control. Prog Cell Cycle Res 1(11):33-52. Garrington, TP and Johnson, GL (1999) Organization and regulation of mitogen-activated protein kinase

signaling pathways. Curr Opin Cell Biol 11(2) Apr, 211-218.

Elion, EA (1998) Routing MAP kinase cascades. Science 281(5383):1625-1626.

Related Products

200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
600-401-281	Anti-MAPKAP Kinase 2 (RABBIT) Antibody - 600-401-281
600-401-905	Anti-EGFR (RABBIT) Antibody - 600-401-905
600-401-928	Anti-EGFR pY1197 (RABBIT) Antibody - 600-401-928

Related Links

UniProtKB	http://www.uniprot.org/uniprot/P28482
NCBI	http://www.ncbi.nlm.nih.gov/protein/66932916
NCBI - 66932916	http://www.ncbi.nlm.nih.gov/protein/66932916
UniProt - P28482	http://www.uniprot.org/uniprot/P28482
Gene ID - 5594	http://www.ncbi.nlm.nih.gov/gene/5594

Images

1 Western blot using Rockland's Affinity Purified anti-p42 MAP Kinase (ERK2) antibody shows detection of ERK2 in several whole cell lysates: HeLa (lane 1), A431 (lane 2), and NIH3T3 (lane 3). Detection occurs using a 1:1,000 dilution of the primary antibody followed by 1:4,000 dilution of HRP Goat-a-Rabbit with visualization via ECL. Film exposure was approximately 1'. Other detection systems will yield similar results.

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