

Datasheet for 100-401-218**ERK2 Antibody****Overview**

Description:	Anti-ERK2 (RABBIT) Antibody - 100-401-218
Item No.:	100-401-218
Size:	100 µL
Applications:	WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details**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.

Synonyms:	rabbit anti-Erk2 Antibody, MAP kinase 1, MAP kinase 2, p42-MAPK
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name: MAPK1

Reactivity:	Human, Mouse
Immunogen Type:	Recombinant Protein
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.
Purity/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.
Relevant Links:	• UniProtKB - P28482 • NCBI - 66932916 • GeneID - 5594

Application Details

Tested Applications:	WB
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
IP:	5.0 µg/mg sample
WB:	1:1,000-1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.01% (w/v) Sodium Azide

Stabilizer: None

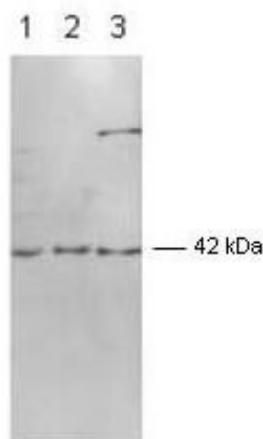
Shipping & Handling

Shipping Condition: Dry Ice

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.

Expiration: Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western blot using Rockland's Affinity Purified anti-p42 MAP Kinase (ERK2) antibody shows detection of ERK2 in several whole cell lysates. Lane 1: HeLa (p/n W09-000-364), Lane 2: A431 (p/n W09-000-361), and Lane 3: NIH3T3 (p/n W10-000-358). Primary antibody: Anti-p42 at 1:1,000. Secondary antibody: HRP Goat-a-Rabbit 1:4,000 dilution with visualization via ECL. Film exposure was approximately 1'. Other detection systems will yield similar results.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.