

Human MAPK1 (ERK2) Knockout A549 Cell Lysate, Clone 15

Cat. No. A549-019HCL **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species	Human
Description	ERK2 antibodies detect the ERK2 isoform. Mitogen activated protein kinase 1, also known as MAPK1, ERK, or ERK2, is an integral component of the MAP kinase cascade that regulates cell growth and differentiation. ERK1 and ERK2 are activated by MEK1 and MEK2 in the B-raf signaling pathway resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Human ERK1 and ERK2 are 84% identical in sequence and share common functionality in cells.
Form	Liquid (sterile filtered)
Specificity	MAPK1 (ERK2) knockout A549 cells were grown in medium supplemented with 10% fetal bovine serum. Cells were washed with PBS and then incubated on ice in modified RIPA buffer to lyse the cells. Protein integrity was ensured using a cocktail of protease inhibitors with broad specificity for the inhibition of aspartic, cysteine, and serine proteases as well as aminopeptidases (0.1 mM AEBSF HCl, 0.08 μ M Aprotinin, 5 μ M Bestatin, 1.5 μ M E-64, 2 μ M Leupeptin Hemisulfate, 1 μ M Pepstatin A). Phosphatase inhibitors 1 mM NaF and 1 mM Na3VO4 were also added. Cell debris was removed by centrifugation. Protein concentration was determined by BCA using a commercially available kit. Protein concentration was adjusted to 2 mg/mL with modified 1 $\times$ RIPA buffer. MAPK1 (ERK2) knockout A549 Clone 15 contains knockout deletions on all three copies of the MAPK1 (ERK2) gene in A549 cells. Each copy contains the same 104 bp deletion induced by CRISPR/Cas9. The deletion

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occurs in exon 2 and disrupts the sequence between amino acids 59 to 94. These mutations induce a frame-shift and result in early stop codons. Validated by Sanger sequencing and Western blot.

Applications	WB, SDS-PAGE
Cell Line	Human A549 (lung epithelial carcinoma)
Lysate Fractionation	Whole Cell Lysate
Lysate Stimulation	Not Stimulated
Culture Type	Tissue Culture
Induction	None (Control)
Concentration	2.0 mg/mL by BCA assay
Buffer	1× RIPA Buffer with HALT Protease and Phosphatase Inhibitors
Preservative	None
Stabilizer	None
Shipping	Dry Ice
Storage	Store vial at -70 centigrade or COLDER. For extended storage, aliquot contents to minimize freeze/thaw cycles.
Expiration	Expiration date is one year from date of receipt.

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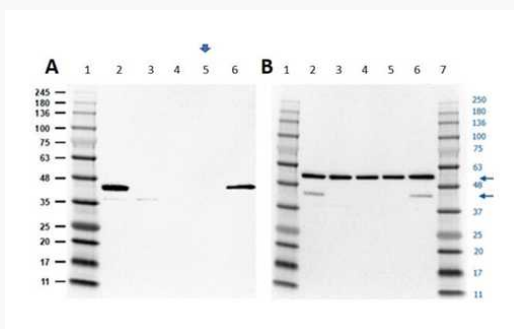
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GENE INFORMATION

Gene Name	MAPK1 mitogen-activated protein kinase 1 [Homo sapiens (human)]
Official Symbol	MAPK1
Synonyms	MAPK1; mitogen-activated protein kinase 1; ERK; p38; p40; p41; ERK2; ERT1; NS13; ERK-2; MAPK2; PRKM1; PRKM2; P42MAPK; p41mapk; p42-MAPK; mitogen-activated protein kinase 1; MAP kinase 1; MAP kinase 2; MAPK 2; extracellular signal-regulated kinase 2; mitogen-activated protein kinase 2; protein tyrosine kinase ERK2; EC 2.7.11.24
Gene ID	5594
mRNA Refseq	NM_138957
Protein Refseq	NP_620407
MIM	176948
UniProt ID	P28482

Western Blot



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Western Blot of Human MAPK1 (ERK2) Knockout A549 Cell Lysate.

Lane 1: Opal Prestained MW Marker.

Lane 2: A549 WCL Parental.

Lane 3: A549 MAPK1 KO Clone 4.

Lane 4: A549 MAPK1 KO Clone 10.

Lane 5: A549 MAPK1 KO Clone 15.

Lane 6: HeLa WCL Parental

Load: 10 µg lysate/lane.

Primary Antibody [Blot A] Anti-MAPK1(ERK2) ~44 kDa; [Blot B] stripped and re-probed with Anti Tubulin ~50 kDa; at 1 µg/mL overnight at 2-8 centigrade.

Secondary Antibody: Goat Anti-Rabbit IgG HRP at 1:30,000 for 1hr at RT.

Block: BlockOut Buffer for 1 hr at RT.

No detection of expected band at ~44 kDa is observed in MAPK1 (ERK2) knockout A549 when compared with unmodified A549 cell lysates by Western blot.