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Anti-ERK1/2 Rabbit Monoclonal Antibody

Catalog Number: M00104-1

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Overview

Product Name	Anti-ERK1/2 Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ERK1/2 Rabbit Monoclonal Antibody catalog # M00104-1. Tested in WB, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IP, IF, ICC, WB
Clonality	Monoclonal DFF-13
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P27361/P28482

Technical Details

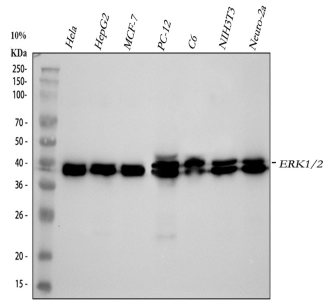
Immunogen	A synthesized peptide derived from human ERK1/2
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000

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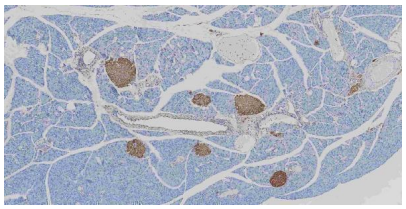
	ICC/IF 1:50-200 IP 1:20 FC 1:20

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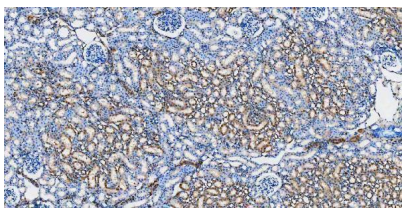
Anti-ERK1/2 Rabbit Monoclonal Antibody (M00104-1) Images



Western blot analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: rat PC-12 whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse NIH3T3 whole cell lysates, Lane 7: mouse Neuro-2a whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ERK1/2 antigen affinity purified monoclonal antibody (M00104-1) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for ERK1/2 at approximately 41, 43 kDa. The expected band size for ERK1/2 is at 41, 43 kDa.



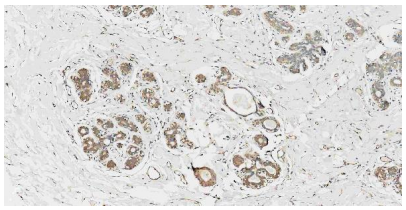
IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of mouse pancreas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



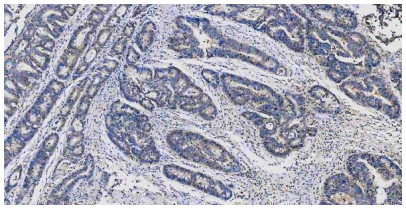
IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded

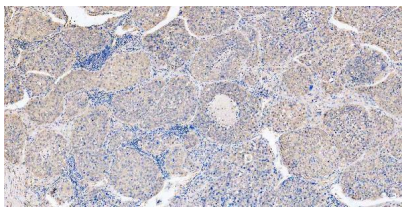
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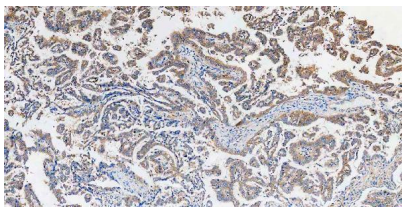
section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



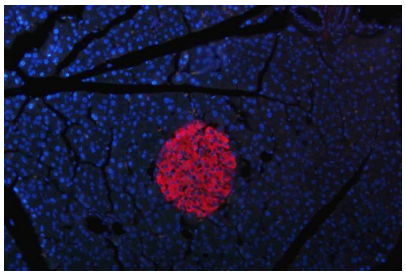
IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



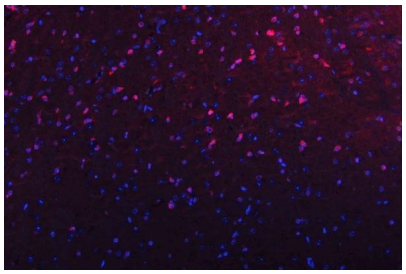
IHC analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. HRP Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of mouse pancreas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10%

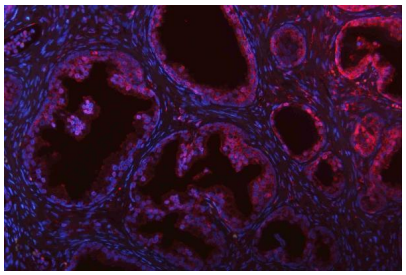
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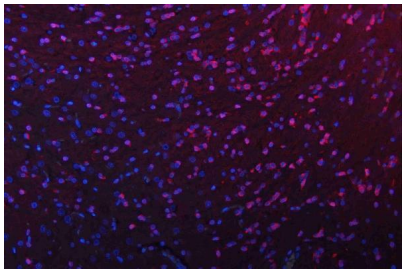
goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



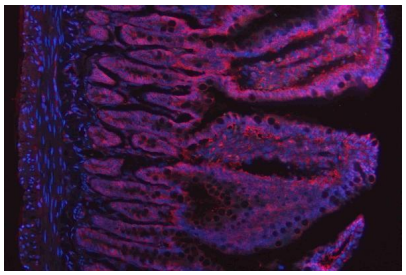
IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human prostate cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



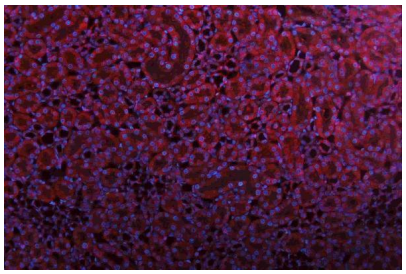
IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL

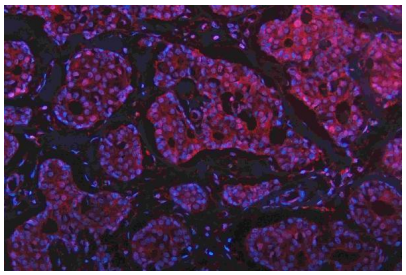
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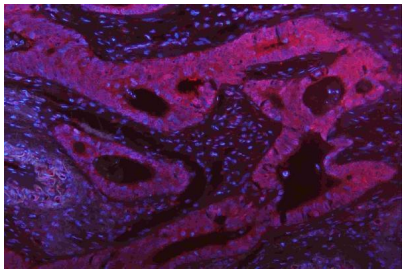
rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



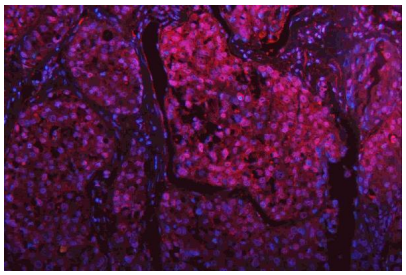
IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



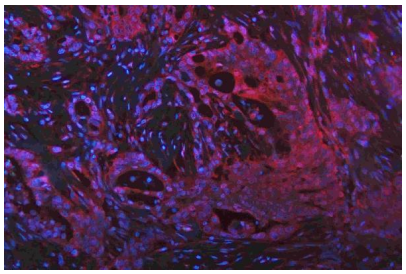
IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25

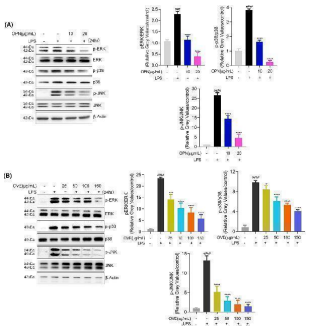
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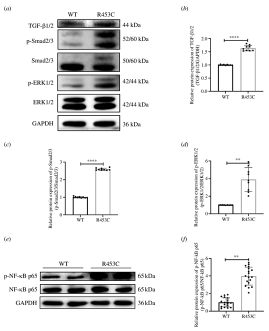
ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of ERK1/2 using anti-ERK1/2 antibody (M00104-1). ERK1/2 was detected in a paraffin-embedded section of human pancreatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 25 ug/mL rabbit anti-ERK1/2 Antibody (M00104-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



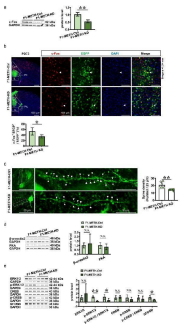
Effects of OPN and OVE on activation of MAPK signaling pathways in LPS-stimulated RAW264.7 cells. Expression levels of p-ERK, ERK, p-p38, p-38, p-JNK, and JNK were detected in the same samples for COX-2 detection after 24 h of LPS stimulation. (A) OVE treatment. (B) OPN treatment. All experiments were carried out in triplicates and data are presented as means ± SDs; one-way ANOVA analysis was adopted for multiple comparisons; ###P < 0.001, ####P < 0.0001, compared to the untreated control group; ***P < 0.001 and ****P < 0.0001, compared to the LPS control group. Index in PubMed under a CC BY license. PMID: 39455284



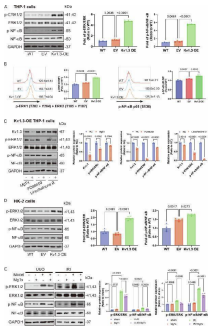
Effect of MYH7 R453C mutation on TGF-beta/Smad2/3, ERK1/2, NF-kappaB and PI3K/AKT pathways. (a) The protein expression of TGF-beta/Smad2/3 and ERK1/2 cascades were detected by western blotting. (b–d) The protein expression of TGF-beta1/2, p-Smad2/3/Smad2/3 and p-ERK1/2/ERK1/2 were quantitated using densitometry. (e) The protein expression of NF-kappaB signalling was detected by western blotting. (f) Quantitative analysis of the protein expression of p-NF-kappaB p65 and NF-kappaB p65. **p < 0.01, ****p < 0.0001. n = 3 biologically independent samples. Index in PubMed under a CC BY license. PMID: 38862020

Effects of knocking-down ADRB1 CaMKII on mPFC activity and subsequent signals in METH-sired male F1. a Levels of c-Fos protein. b The c-Fos immunostaining. Scale bar, 500 um /100 um. c Density of dendritic spine. Scale bar, 50 um /10 um. d Levels of beta-arestin2 and PKA protein. e Levels of ERK1/2, p-ERK1/2, ERK1/2/p-ERK1/2, CREB, p-CREB, p-CREB/ CREB and ΔFosB protein. F1-METH-Ctrl,

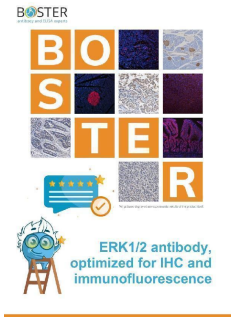
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METH-sired male F1 mice injected with Ctrl virus. F1-METH-KD, METH-sired male F1 mice injected with KD virus. The data are presented as the Mean ± SD. N.S., $P > 0.05$. * $P < 0.05$, ** $P < 0.01$ vs F1-METH-Ctrl. Index in PubMed under a CC BY license. PMID: 37857642



ERK/NF-kappaB signaling is involved in Kv1.3-related M1 macrophages. A Respective western blotting image and densitometry analysis of ERK/NF-kappaB signaling after transfection with LV-Kv1.3 in THP-1 cells. Data were expressed as mean ± SD (n = 4). B The phosphorylation signal data are depicted in the form of stacked histogram overlaid plots. The mean fluorescence intensity (MFI) of the ERK1/2 and NF-kappaB p65 phosphorylation signal was expressed as the mean ± SD (n = 3). C Effects of MgTx, PD98059, and Licochalcone B on Kv1.3 and ERK/NF-kappaB signaling in LV-Kv1.3-transduced THP-1 cells were analyzed by western blotting. Data were expressed as mean ± SD (n = 3). D Respective western blotting image and densitometry analysis of ERK/NF-kappaB signaling in HK-2 cells co-cultured with the supernatant from LV-Kv1.3-transduced THP-1 cells for 48 h. Data were expressed as mean ± SD (n = 4). E Respective western blotting image and densitometry analysis of ERK/NF-kappaB signaling in mice subjected to UUO (7 days post-surgery) and IRI. Data were expressed as mean ± SD (n = 4). Index in PubMed under a CC BY license. PMID: 40324999



13 Publications Citing This Product

1. PubMed ID: 10.26355/eurrev_201812_16641, CXCL13 inhibition induce the apoptosis of MDA-MB-231 breast cancer cells through blocking CXCR5/ERK signaling pathway.

2. PubMed ID: -, Huanyue Cui,Xueying Liu,Jin Zhang,Ke Zhang,Dahong Yao,Shi Dong,Shushu Feng,Lu Yang, Yuyao Li,Hangyu Wang,Jian Huang,Jinhui Wang,"Rhodiola rosea L. Attenuates Cigarette Smoke and Lipopolysaccharide-Induced COPD in Rats via Inflammation Inhibition and Antioxidant and Antifibrosis Pathways",Evidence-Based Complementary and Alternative Medicine,vol. 2021,Article ID 6103158,18 pages,2021.https://doi.org/10.1155/2021/6103158

3. PubMed ID: -, Feng,S.,Wang,S.,Sun,S.,Su,H.,& Zhang,L.(2021).Effects of combination treatment with transcranial magnetic stimulation and bone

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marrow mesenchymal stem cell transplantation or Raf inhibition on spinal cord injury in rats.Molecular Medicine Reports,23,294.h

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Anti-ERK1/2 Rabbit Monoclonal Antibody

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