

Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (MILAN8R), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Human, Mouse
Published Species	Artificial Control, Mouse, Human
Host/Isotype	Mouse / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	MILAN8R
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage Conditions	4° C
RRID	AB_2572926

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	Assay-Dependent	5 Publications
Immunocytochemistry (ICC)	5 µg/mL	-
Immunofluorescence (IF)	5 µg/mL	-
Immunohistochemistry (Paraffin) (IHC (P))	5 µg/mL	-
Western Blot (WB)	1 µg/mL	2 Publications

Product Specific Information

Description: This MILAN8R monoclonal antibody recognizes human and mouse extracellular signal-regulated kinases 1 and 2 (also known as ERK1/2, p44/p42, or MAPK3/1) when phosphorylated on T202/Y204. ERK1/2 belong to a family of conserved serine/threonine protein kinases known as mitogen-activated protein kinases (MAPKs) that are involved in many cellular programs such as proliferation, differentiation, motility, and survival. ERK1/2 signaling is activated in response to numerous extracellular stimuli including mitogens, growth factors, and cytokines. The primary activators of ERK1/2 are MEK1 and MEK2 which act by phosphorylating the activation loop residues T202/Y204 and T185/Y187 in ERK1 and ERK2, respectively. Several downstream targets of ERK1/2 have been identified, including p90RSK and the transcription factor Elk-1. ERK1/2 are negatively regulated by MAPK phosphatases, known as DUSPs or MKPs, as well as by chemical inhibitors of MEK including U0126 and PD98059. Disruption of the ERK pathway is common in many types of cancer.

Applications Reported: This MILAN8R antibody has been reported for use in intracellular staining followed by flow cytometric analysis, western blotting, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, immunohistochemical staining, and immunocytochemistry. (Fluorochrome conjugated MILAN8R is recommended for use in intracellular flow cytometry.).

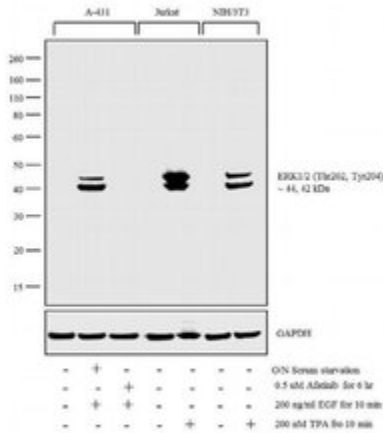
Applications Tested: This MILAN8R antibody has been tested by immunoblotting of stimulated Jurkat cells and can be used at less than or equal to 5 µg/mL. This MILAN8R antibody has been tested by immunohistochemistry on formalin-fixed paraffin embedded human tissue using low pH antigen retrieval and by immunocytochemistry of MeOH-fixed cells and can be used at less than or equal to 5 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

Aggregation: Less than 10%, as determined by HPLC.

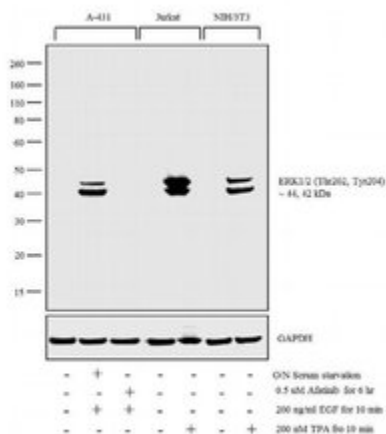
Filtration: 0.2 µm post-manufacturing filtered.

✓ Advanced Verification Data



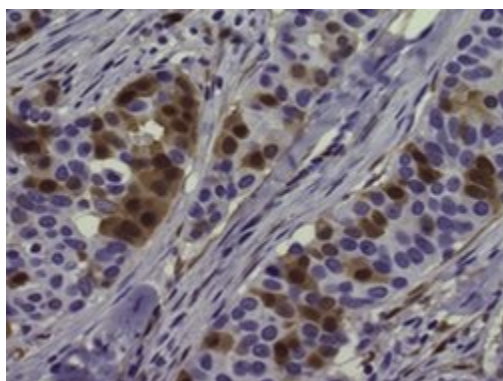
Phospho-ERK1/2 (Thr202, Tyr204) Antibody (14-9109-82)

Altered expression of target protein upon cell treatment demonstrates antibody specificity. Western blot analysis of Phospho-ERK1/ERK2 (Thr202, Tyr204) using Anti-Phospho-ERK1/ERK2 (Thr202, Tyr205) monoclonal Antibody (Product # 14-9109-82) shows increased expression of proteins phosphorylated at the threonine and tyrosine residues in A-431 cell line upon EGF treatment and in Jurkat, NIH/3T3 cell lines upon TPA treatment. Pre-treatment with antagonist, Afatinib resulted in inhibition of ERK1/ERK2 (Thr202, Tyr204) phosphorylation upon EGF treatment in A-431 cell line. Cell treatment validation info.



Phospho-ERK1/2 (Thr202, Tyr204) Antibody (14-9109-82) in WB

Western blot analysis was performed on whole cell extracts (30 μ g lysate) of A-431 (Lane 1), A-431 serum starved for overnight followed by EGF (200 ng/mL for 10 min) (Lane 2), A-431 treated with Afatinib followed by EGF (0.5 μ M for 6hr, 200 ng/mL for 10 min) (Lane 3), Jurkat (Lane 4), Jurkat treated with TPA (200 nM for 10 min) (Lane 5), NIH/3T3 (Lane 6), NIH/3T3 treated with TPA (200 nM for 10 min) (Lane 7) was probed with Anti-Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (Product # 14-9109-82, 1 μ g/mL) and detected by chemiluminescence using Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A28177, 0.25 μ g/mL, 1:4000 dilution). A 44, 42 kDa band corresponding to Phospho-ERK1/2 (Thr202, Tyr204) was observed upon treatment across the cell lines tested and was inhibited upon Afatinib treatment in A431 cell line.



Phospho-ERK1/2 (Thr202, Tyr204) Antibody (14-9109-82) in WB

Total ERK1/2 was used as a loading control. Bands were visualized with Anti-Mouse IgG HRP. RIGHT: Immunohistochemistry of formalin-fixed paraffin embedded human breast cancer tissue stained with 5 μ g/mL of Anti-Human/Mouse phospho-ERK1/2 (T202/Y204) Purified followed by Anti-Mouse IgG Biotin, Avidin HRP, and DAB visualization. Nuclei are counterstained with hematoxylin.

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Western Blot (2)

Oncology letters

Butyrate upregulates the TLR4 expression and the phosphorylation of MAPKs and NK-B in colon cancer cell *in vitro*.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 14-9109-82) in Western Blot"

Authors: Xiao T,Wu S,Yan C,Zhao C,Jin H,Yan N,Xu J,Wu Y,Li C,Shao Q,Xia S

Species
Not Applicable

Dilution
Not Cited

Year
2018

Endocrinology

Fish Oil-Rich Diet Promotes Hematopoiesis and Alters Hematopoietic Niche.

"14-9109 was used in Western Blotting to investigate the influence of diet on the self-renewal and differentiation of hematopoietic stem cells."

Authors: Xia S,Li XP,Cheng L,Han MT,Zhang MM,Shao QX,Xu HX,Qi L

Species
Mouse

Dilution
1:1000

Year
2015

Flow Cytometry (5)

Acta neuropathologica

Germline and somatic FGFR1 abnormalities in dysembryoplastic neuroepithelial tumors.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 14-9109-82) in Flow Cytometry"

Authors: Rivera B,Gayden T,Carrot-Zhang J,Nadaf J,Boshari T,Faury D,Zeinieh M,Blanc R,Burk DL,Fahiminiya S, Bareke E,Schüller U,Monoranu CM,Sträter R,Kerl K,Niederstadt T,Kurlemann G,Ellezam B,Michalak Z,Thom M, Lockhart PJ,Leventer R,J,Ohm M,MacGregor D,Jones D,Karamchandani J,Greenwood CM,Berghuis AM,Bens S,Siebert R,Zakrzewska M,Liberski PP,Zakrzewski K,Sisodiya SM,Paulus W,Albrecht S,Hasselblatt M,Jabado N,Foulkes WD, Majewski J

Species
Human

Dilution
Not Cited

Year
2016

Journal of immunology (Baltimore, Md. : 1950)

The Bacterial Enzyme IdeS Cleaves the IgG-Type of B Cell Receptor (BCR), Abolishes BCR-Mediated Cell Signaling, and Inhibits Memory B Cell Activation.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 14-9109-82) in Flow Cytometry"

Authors: Järnum S,Bockermann R,Runström A,Winstedt L,Kjellman C

Species
Not Applicable

Dilution
Not Cited

Year
2015

[View more Flow references on thermofisher.com](#)

More applications with references on thermofisher.com

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