

# Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (MILAN8R), Alexa Fluor 488, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Published Species	Artificial Control, Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), Alexa Fluor 488, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	MILAN8R
Conjugate	Alexa Fluor® 488
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin, 0.2% BSA
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2574441

Applications	Tested Dilution	Publications
Western Blot (WB)	-	1 Publication
Flow Cytometry (Flow)	5 µL (0.125 µg)/test	4 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.

Specificity of this MILAN8R clone was determined by ELISA, flow cytometry, and western blotting.

Applications Reported: This MILAN8R antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested: This MILAN8R antibody has been tested by intracellular staining followed by flow cytometric analysis of

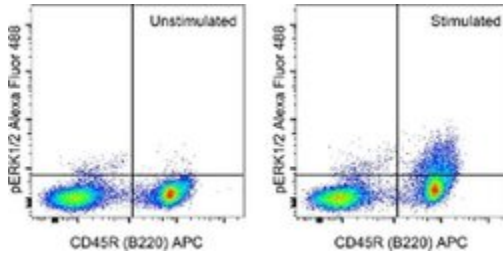
normal human peripheral blood cells. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Staining Protocol: We recommend using Protocol C: Two-step protocol: Fixation/Methanol. Protocol A: Two-step protocol: intracellular (cytoplasmic) proteins and Protocol B: One-step protocol: intracellular (nuclear) proteins cannot be used. All Protocols can be found in the Flow Cytometry Protocols: "Staining Intracellular Antigens for Flow Cytometry Protocol" located in the Best Protocols Section under the Resources tab online.

Excitation: 488 nm; Emission: 519 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

## Product Images For Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (MILAN8R), Alexa Fluor 488, eBioscience™



### Phospho-ERK1/2 (Thr202, Tyr204) Antibody (53-9109-42) in Flow

Mouse splenocytes were unstimulated (left) or stimulated with F(ab')<sub>2</sub> Anti-Mouse IgM, u chain specific Functional Grade Purified (Product # 16-5092-85) and Anti-Mouse CD40 Functional Grade Purified (Product # 16-0401-82) (right). The cells were then intracellularly stained with Anti-Human/Mouse CD45R (B220) APC (Product # 17-0452-82) and Anti-Human/Mouse phospho-ERK1/2 (T202/Y204) Alexa Fluor® 488 using the IC Fixation/Methanol protocol. Cells in the lymphocyte gate were used for analysis.

[View more figures on thermofisher.com](https://www.thermofisher.com)

## 5 References

### Western Blot (1)

#### 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 # 53-9109-42) 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

### Flow Cytometry (4)

#### Acta neuropathologica

#### Germline and somatic FGFR1 abnormalities in dysembryoplastic neuroepithelial tumors.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 53-9109-42) 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 RJ,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

#### The Journal of clinical investigation

#### Heterogeneity of leukemia-initiating capacity of chronic myelogenous leukemia stem cells.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 53-9109-42) in Flow Cytometry"

Authors: Zhang B,Li L,Ho Y,Li M,Marcucci G,Tong W,Bhatia R

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2016

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

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