Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (MILAN8R), PE-eFluor™ 610, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Published Species	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE-eFluor™ 610, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	MILAN8R
Conjugate	PE-eFluor™ 610
Excitation/Emission Max	565/606 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2574675

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.5 µg)/test	8 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 pre-titrated and tested by intracellular staining followed by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.5 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 10^5 to 10^8 cells/test.

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.

PE-eFluor® 610 can be excited with laser lines from 488-561 nm and emits at 607 nm. We recommend using a 610/20 band pass filter (equivalent to PE-Texas Red®). Please make sure that your instrument is capable of detecting this fluorochome.

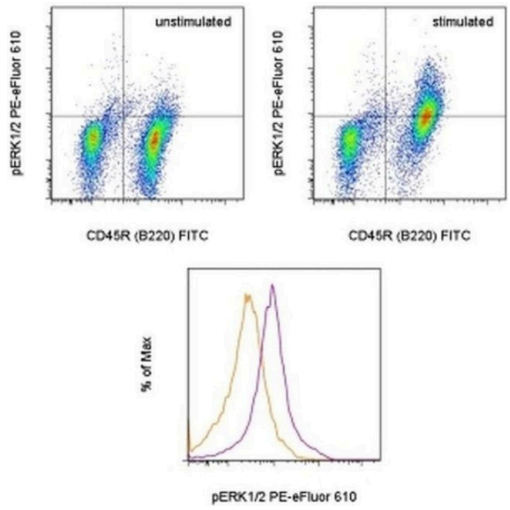
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488-561 nm; Emission: 607 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Phospho-ERK1/2 (Thr202, Tyr204) Monoclonal Antibody (MILAN8R), PE-eFluor™ 610, eBioscience™



Phospho-ERK1/2 (Thr202, Tyr204) Antibody (61-9109-42) in Flow
TOP: Mouse splenocytes were unstimulated (left) or stimulated with F (ab')2 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) FITC (Product # 11-0452-82) and Anti-Human/Mouse phospho-ERK1/2 (T202 /Y204) PE-eFluor® 610 using the IC Fixation/Methanol Protocol. Cells in the lymphocyte gate were used for analysis. BOTTOM: Mouse splenocytes were unstimulated (orange histogram) or stimulated with F (ab')2 Anti-Mouse IgM, u chain specific Functional Grade Purified (Product # 16-5092-85) and Anti-Mouse CD40 Functional Grade Purified (Product # 16-0401-82) (purple histogram). The cells were then intracellularly stained with Anti-Human/Mouse CD45R (B220) FITC (Product # 11-0452-82) and Anti-Human/Mouse phospho-ERK1/2 (T202 /Y204) PE-eFluor® 610 using the IC Fixation/Methanol Protocol. B220+ cells in the lymphocyte gate were used for analysis.

View more figures on thermofisher.com

8 References

Flow Cytometry (8)

Oncogenesis

Year
2021

Suppression of 4.1R enhances the potency of NKG2D-CAR T cells against pancreatic carcinoma via activating ERK signaling pathway.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 61-9109-42) in Flow Cytometry"

Authors: Gao Y,Lin H,Guo D,Cheng S,Zhou Y,Zhang L,Yao J,Farooq MA,Ajmal I,Duan Y,He C,Tao L,Wu S,Liu M,Jiang W

Scientific reports

Year
2021

Berberine modulates hyper-inflammation in mouse macrophages stimulated with polyinosinic-polycytidylic acid via calcium-CHOP/STAT pathway.

"Published figure using Phospho-ERK1/2 (Thr202, Tyr204) monoclonal antibody (Product # 61-9109-42) in Flow Cytometry"

Authors: Kim HJ,Kim YJ,Park W

View more Flow references on thermofisher.com

More applications with references on thermofisher.com