Datasheet for ABIN6261598

# anti-ERK1/2 antibody

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## Overview

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|---|---|
| Quantity: | 100 µL |
| Target: | ERK1/2 (MAPK1/3) |
| Reactivity: | Human, Mouse, Rat, Cow, Pig, Zebrafish (Danio rerio), Dog, Sheep, Fish, Horse, Monkey |
| Host: | Rabbit |
| Clonality: | Polyclonal |
| Application: | Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC) |

## Product Details

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| Immunogen: | A synthesized peptide derived from human ERK1/2 |
| Isotype: | IgG |
| Specificity: | ERK1/2 antibody detects endogenous levels of total ERK1/2 |
| Cross-Reactivity: | Cow (Bovine), Dog (Canine), Fish, Horse (Equine), Human, Monkey, Mouse (Murine), Pig (Porcine), Rat (Rattus), Sheep (Ovine), Zebrafish (Danio rerio) |
| Purification: | The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific). |

## Target Details

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| Target: | ERK1/2 (MAPK1/3) |
| Alternative Name: | ERK1/2 (MAPK1/3 Products) |
| Background: | Description: Serine/threonine kinase which acts as an essential component of the MAP kinase |

## Target Details

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| | signal transduction pathway. MAPK1/ERK2 and MAPK3/ERK1 are the 2 MAPKs which play an important role in the MAPK/ERK cascade. They participate also in a signaling cascade initiated by activated KIT and KITLG/SCF. Depending on the cellular context, the MAPK/ERK cascade mediates diverse biological functions such as cell growth, adhesion, survival and differentiation through the regulation of transcription, translation, cytoskeletal rearrangements. The MAPK/ERK cascade plays also a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. About 160 substrates have already been discovered for ERKs. Many of these substrates are localized in the nucleus, and seem to participate in the regulation of transcription upon stimulation. However, other substrates are found in the cytosol as well as in other cellular organelles, and those are responsible for processes such as translation, mitosis and apoptosis. Moreover, the MAPK/ERK cascade is also involved in the regulation of the endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis. The substrates include transcription factors (such as ATF2, BCL6, ELK1, ERF, FOS, HSF4 or SPZ1), cytoskeletal elements (such as CANX, CTTN, GJA1, MAP2, MAPT, PXN, SORBS3 or STMN1), regulators of apoptosis (such as BAD, BTG2, CASP9, DAPK1, IER3, MCL1 or PPARG), regulators of translation (such as EIF4EBP1) and a variety of other signaling-related molecules (like ARHGEF2, FRS2 or GRB10). Protein kinases (such as RAF1, RPS6KA1/RSK1, RPS6KA3/RSK2, RPS6KA2/RSK3, RPS6KA6/RSK4, SYK, MKNK1/MNK1, MKNK2/MNK2, RPS6KA5/MSK1, RPS6KA4/MSK2, MAPKAPK3 or MAPKAPK5) and phosphatases (such as DUSP1, DUSP4, DUSP6 or DUSP16) are other substrates which enable the propagation the MAPK/ERK signal to additional cytosolic and nuclear targets, thereby extending the specificity of the cascade.<br>Gene: MAPK3 |
| Molecular Weight: | 42kDa,44kDa |
| Gene ID: | 5595 |
| UniProt: | P27361, P28482 |

## Application Details

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| Application Notes: | WB: 1:1000~1:5000 IHC: 1:100~1:500 IF 1:200 |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Concentration: | 1 mg/mL |
| Buffer: | PBS, pH 7.4,50 % glycerol. |

## Publications

Product cited in:

Deng, Cheng, Wu, Wang, Zhou, Huang: "Oxabicycloheptene Sulfonate Protects Against β-Amyloid-induced Toxicity by Activation of PI3K/Akt and ERK Signaling Pathways Via GPER1 in C6 Cells." in: **Neurochemical research**, Vol. 42, Issue 8, pp. 2246-2256, (2018) (PubMed).

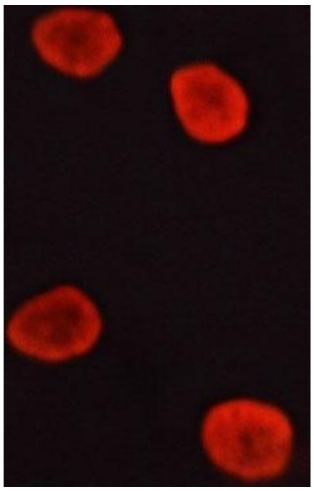
Li, Xiong, Xu, Duan, Yang, Zhou, Tu: "miR-29a regulated ER-positive breast cancer cell growth and invasion and is involved in the insulin signaling pathway." in: **Oncotarget**, Vol. 8, Issue 20, pp. 32566-32575, (2018) (PubMed).

Peng, Wu, Deng, Zhou, Song, Yang, Zhang, Xu, Xia, Cai, Liu, Peng: "MiR-377 promotes white adipose tissue inflammation and decreases insulin sensitivity in obesity via suppression of sirtuin-1 (SIRT1)." in: **Oncotarget**, Vol. 8, Issue 41, pp. 70550-70563, (2018) (PubMed).

Liu, Huang, Jin, Zhou, Chen, Li, Chen, Li, Yao, Li, Lan, Ye, Wang: "MicroRNA-370 inhibits the growth and metastasis of lung cancer by down-regulating epidermal growth factor receptor expression." in: **Oncotarget**, Vol. 8, Issue 50, pp. 88139-88151, (2018) (PubMed).

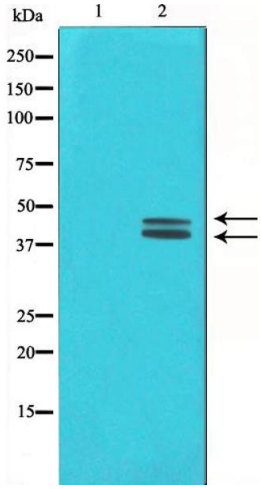
Zhao, Fu, Sun, Liu: "Ligustrazine suppresses neuron apoptosis via the Bax/Bcl-2 and caspase-3 pathway in PC12 cells and in rats with vascular dementia." in: **IUBMB life**, Vol. 70, Issue 1, pp. 60-70, (2018) (PubMed).

There are more publications referencing this product on: Product page



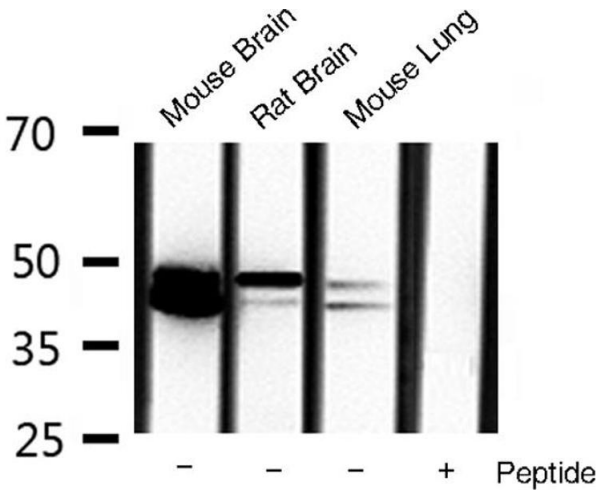
## Immunofluorescence (fixed cells)

**Image 1.** ABIN6266535 staining lovo cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37°C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37°C. A Alexa Fluor® 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.




## Western Blotting

**Image 2.** Western blot analysis on COLO205 cell lysate using ERK1/2 Antibody,The lane on the left is treated with the antigen-specific peptide.




## Western Blotting

**Image 3.** Western blot analysis of extracts of various celllines,using erk1/2 antibody.

Please check the product details page for more images. Overall 5 images are available for ABIN6261598.