

## ERK1/2 Antibody

Catalog No: #33367



Package Size: #33367-1 50ul #33367-2 100ul

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

## Description

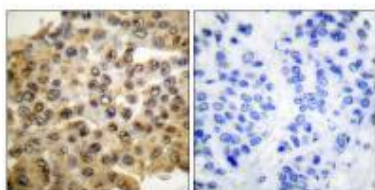
|                       |                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name          | ERK1/2 Antibody                                                                                                                                    |
| Host Species          | Rabbit                                                                                                                                             |
| Clonality             | Polyclonal                                                                                                                                         |
| Purification          | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                              |
| Applications          | WB IHC                                                                                                                                             |
| Species Reactivity    | Human;Mouse;Rat                                                                                                                                    |
| Specificity           | The antibody detects endogenous levels of total ERK1/2 protein.                                                                                    |
| Immunogen Type        | Peptide                                                                                                                                            |
| Immunogen Description | Synthesized peptide derived from human ERK1/2.                                                                                                     |
| Conjugates            | Unconjugated                                                                                                                                       |
| Target Name           | ERK1/2                                                                                                                                             |
| Other Names           | EC 2.7.11.24; Extracellular signal-regulated kinase 1; ERK-1; Insulin-stimulated MAP2 kinase; MAP kinase 1                                         |
| Accession No.         | Swiss-Prot: P27361NCBI Gene ID: 5595                                                                                                               |
| SDS-PAGE MW           | 42,44kd                                                                                                                                            |
| Concentration         | 1.0mg/ml                                                                                                                                           |
| Formulation           | Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| Storage               | Store at -20°C                                                                                                                                     |

## Application Details

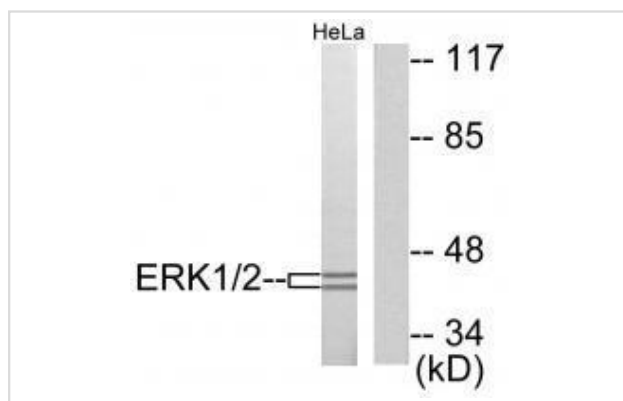
Western blotting: 1:500~1:3000

Immunohistochemistry: 1:50~1:100

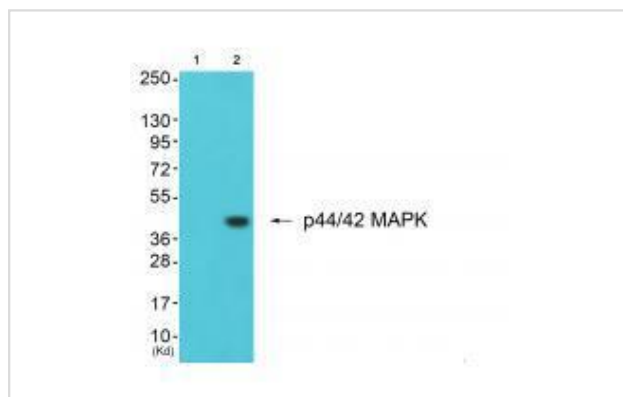
## Images



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue, using ERK1/2 antibody #33367.



Western blot analysis of extracts from HeLa cells, using ERK1/2 antibody #33367.



Western blot analysis of extracts from K562 cells (Lane 2), using p44/42 MAPK antibody #33367. The lane on the left is treated with synthesized peptide.

## Background

Serine/threonine kinase which acts as an essential component of the MAP kinase 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.

Charleen T. Chu, Eur. J. Biochem., Jun 2004; 271: 2060 - 2066.

Youwei Jiang, PNAS, Aug 2001; 98: 10102.

Yu Zhao, J. Physiol., Sep 2003; 551: 691 - 703.

Georges Daoud, J. Physiol., Jul 2005; 566: 409 - 423.

## Published Papers

el at., CD155 Cooperates with PD-1/PD-L1 to Promote Proliferation of Esophageal Squamous Cancer Cells via PI3K/Akt and MAPK Signaling Pathways. In Cancers (Basel) on 2022 Nov 15 by Xiyang Tan, Jie Yang, et al..PMID:36428703, , (2022)

[PMID:36428703](https://pubmed.ncbi.nlm.nih.gov/36428703/)

---

Note: This product is for in vitro research use only and is not intended for use in humans or animals.