

ERK1/2 Antibody

Catalog No: #33367

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

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

Description

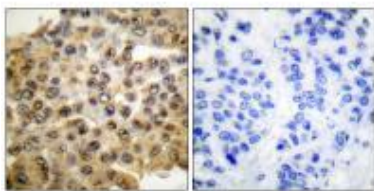
Product Name	ERK1/2 Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Applications	WB IHC
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous levels of total ERK1/2 protein.
Immunogen Type	Peptide
Immunogen Description	Synthesized peptide derived from human ERK1/2.
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
Uniprot	P27361
GeneID	5595;
SDS-PAGE MW	42,44kd
Concentration	1.0mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

Application Details

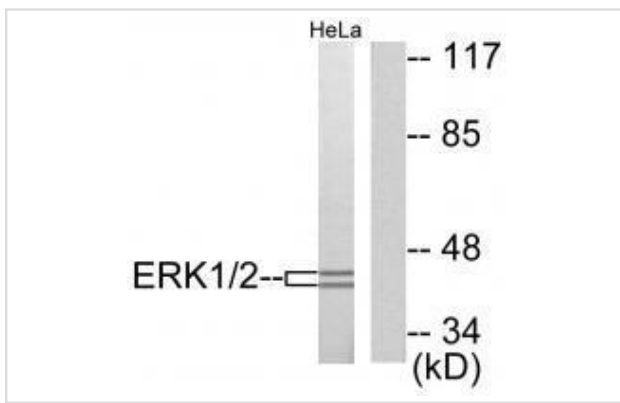
Western blotting: 1:500~1:3000

Immunohistochemistry: 1:50~1:100

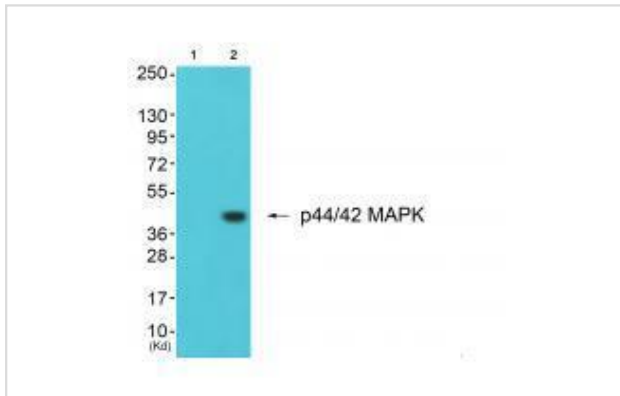
Images



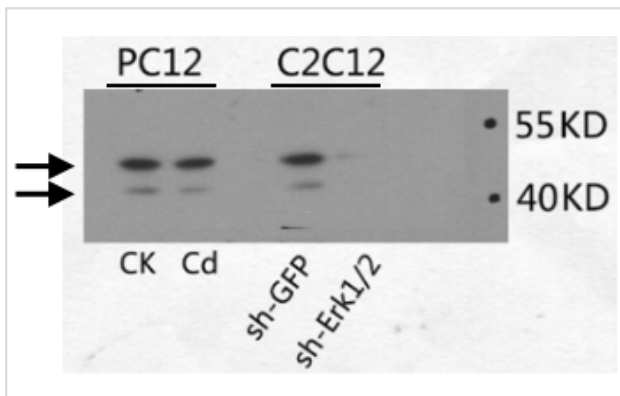
Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue, using ERK1/2 antibody #33367.



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.



Western blotting analysis using ERK1/2 Antibody #33367.

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.

Note: This product is for in vitro research use only