ARG51732
anti-ERK1 + ERK2 phospho (Thr202) antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ERK1 + ERK2 phospho (Thr202)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ERK1 + ERK2
Species	Human
Immunogen	Peptide sequence around phosphorylation site of threonine 202 (F-L-T(p)-E-Y) derived from Human p44/42 MAP Kinase (ERK1 + ERK2).
Conjugation	Un-conjugated
Alternate Names	MAPK 3; ERK1; P44MAPK; Microtubule-associated protein 2 kinase; Insulin-stimulated MAP2 kinase; HUMKER1A; PRKM3; P44ERK1; EC 2.7.11.24; p44-MAPK; Extracellular signal-regulated kinase 1; p44-ERK1; HS44KDAP; MAP kinase isoform p44; Mitogen-activated protein kinase 3; ERT2; MAP kinase 3; ERK-1

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100 - 1:200
IHC-P	1:50 - 1:100
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

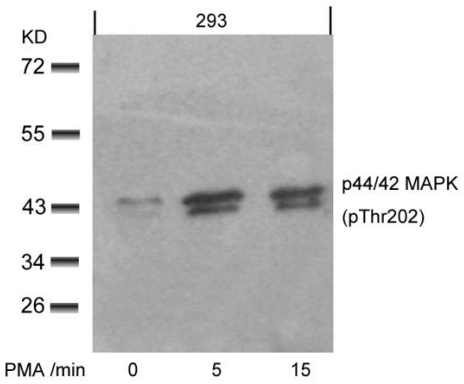
Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatogramphy using non-phosphopeptide.
Buffer	PBS (without Mg2+ and Ca2+, pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

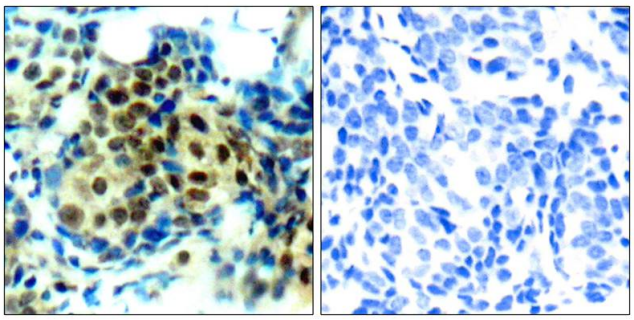
Gene Symbol	MAPK3
Gene Full Name	mitogen-activated protein kinase 3
Background	Involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors such as ELK-1. Phosphorylates EIF4EBP1; required for initiation of translation. Phosphorylates microtubule-associated protein 2 (MAP2). Phosphorylates SPZ1.
Function	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. [UniProt]
Highlight	Related products: MAP Kinase antibodies; MAP Kinase Duos / Panels; Anti-Rabbit IgG secondary antibodies;
Research Area	Developmental Biology antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	43 kDa
PTM	Phosphorylated upon KIT and FLT3 signaling (By similarity). Dually phosphorylated on Thr-202 and Tyr-204, which activates the enzyme. Ligand-activated ALK induces tyrosine phosphorylation. Dephosphorylated by PTPRJ at Tyr-204.

Images



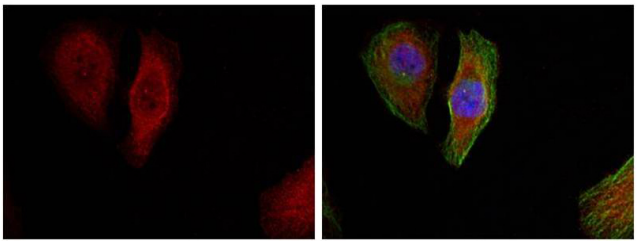
ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody WB image

Western blot: Extracts from 293 cells untreated or treated with PMA for the indicated times, stained with ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody.



ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast carcinoma tissue stained with ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody (left) or the same antibody preincubated with blocking peptide (right).



ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody ICC/IF image

Immunofluorescence: Methanol-fixed HeLa cells showing cytoplasmic, nuclear staining stained with ARG51732 anti-ERK1 + ERK2 phospho (Thr202) antibody.