www.antibodiesinc.com
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530-758-4400

PRODUCT DATASHEET

Anti-ERK2 (central region) Antibody

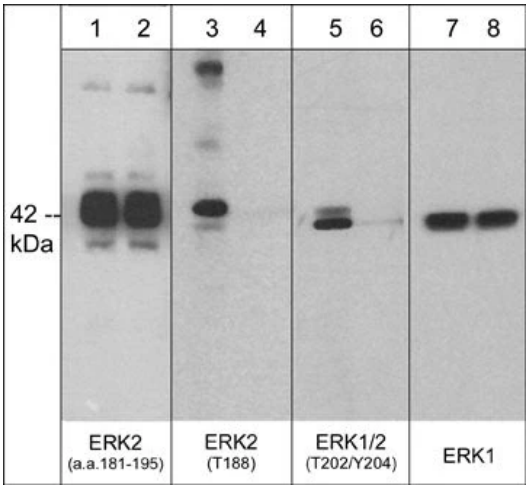
phosphosolutions ANTIBODIES THAT WORK

Product Details

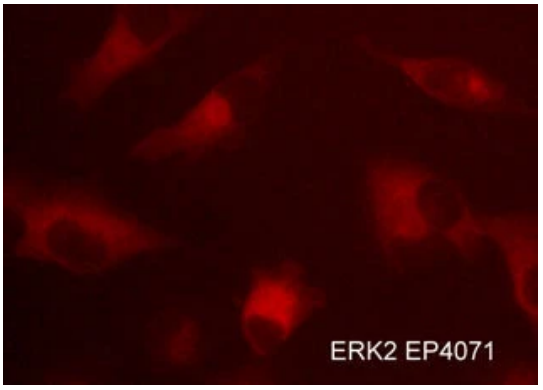
Available Variants	100 µL (SKU:EP4071)
Conjugate	Unconjugated
Isotype	IgG
Gene Name	MAPK2
Host Species	Rabbit
Format	Antigen Affinity Purified
Physical State	Liquid
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN3 and 50% glycerol
Applications	ELISA, ICC, WB
Dilution Ranges	WB: 1:500 ICC: 1:100
Species Reactivity	Chicken, Frog, Human, Mouse, Rat
Immunogen	ERK2 synthetic peptide (coupled to carrier protein) corresponds to amino acids from the central region of mouse ERK2. This sequence is conserved in human, rat, chicken, and fish ERK2, and is highly conserved in other ERK family members, ERK1, ERK5, and ERK7.
Specificity	The antibody detects 42 and 44 kDa* proteins corresponding to ERK1 and ERK2 on SDS-PAGE immunoblots of human A431 epithelial cells.
Molecular Weight	42/44
Quality Control	Western blots performed on each lot.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.

UniProt ID	P49138 UniProt Summary: Stress-activated serine/threonine-protein kinase involved in cytokine production, endocytosis, reorganization of the cytoskeleton, cell migration, cell cycle control, chromatin remodeling, DNA damage response and transcriptional regulation. Following stress, it is phosphorylated and activated by MAP kinase p38-alpha/MAPK14, leading to phosphorylation of substrates. Phosphorylates serine in the peptide sequence, Hyd-X-R-X(2)-S, where Hyd is a large hydrophobic residue. Phosphorylates ALOX5, CDC25B, CDC25C, CEP131, ELAVL1, HNRNPA0, HSP27/HSPB1, KRT18, KRT20, LIMK1, LSP1, PABPC1, PARN, PDE4A, RCSD1, RPS6KA3, TAB3 and TTP/ZFP36. Phosphorylates HSF1; leading to the interaction with HSP90 proteins and inhibiting HSF1 homotrimerization, DNA-binding and transactivation activities. Mediates phosphorylation of HSP27/HSPB1 in response to stress, leading to the dissociation of HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impairment of their chaperone activities and ability to protect against oxidative stress effectively. Involved in inflammatory response by regulating tumor necrosis factor (TNF) and IL6 production post-transcriptionally: acts by phosphorylating AU-rich elements (AREs)-binding proteins ELAVL1, HNRNPA0, PABPC1 and TTP/ZFP36, leading to the regulation of the stability and translation of TNF and IL6 mRNAs. Phosphorylation of TTP/ZFP36, a major post-transcriptional regulator of TNF, promotes its binding to 14-3-3 proteins and reduces its ARE mRNA affinity, leading to inhibition of dependent degradation of ARE-containing transcripts. Phosphorylates CEP131 in response to cellular stress induced by ultraviolet irradiation which promotes binding of CEP131 to 14-3-3 proteins and inhibits formation of novel centriolar satellites. Also involved in late G2/M checkpoint following DNA damage through a process of post-transcriptional mRNA stabilization: following DNA damage, relocalizes from nucleus to cytoplasm and phosphorylates HNRNPA0 and PARN, leading to stabilization of GADD45A mRNA. Involved in toll-like receptor signaling pathway (TLR) in dendritic cells: required for acute TLR-induced macropinocytosis by phosphorylating and activating RPS6KA3.
Country of Origin	United States
Shipping	Blue Ice
Expiration	After date of receipt, stable for at least 1 year at -20°C.
Usage Statement	For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, which can be viewed on our website.
NCBI Gene ID	17164

Product Images



Western blot analysis of human A431 epithelial cells treated with 100 nM calyculin A for 30 min. (lanes 1, 3, 5, & 7) then the blot was treated with lambda phosphatase (lanes 2, 4, 6, & 8). The blots were probed with polyclonal anti-ERK2 (a.a. 181-195) (lanes 1 & 2), anti-ERK2 (Thr-188) (lanes 3 & 4), anti-ERK1/2 (Thr-202/Tyr-204) (lanes 5 & 6), or monoclonal anti-ERK1 (C-terminal region) (lanes 7 & 8).



Immunocytochemical labeling of ERK2 in aldehyde-fixed and NP-40 permeabilized human NCI-H1915 lung carcinoma cells. The cells were labeled with rabbit polyclonal anti-ERK2 (EP4071) antibody. The antibody was detected using appropriate secondary antibody conjugated to DyLight® 594.

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