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Phospho-MAPKAPK5(S93) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3151a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q8IW41
Other Accession	O54992
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54220

Additional Information

Gene ID	8550
Other Names	MAP kinase-activated protein kinase 5, MAPK-activated protein kinase 5, MAPKAP kinase 5, MAPKAP-K5, MAPKAPK-5, MK-5, MK5, p38-regulated/activated protein kinase, PRAK, MAPKAPK5, PRAK
Target/Specificity	This MAPKAPK5 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S93 of human MAPKAPK5.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-MAPKAPK5(S93) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAPKAPK5
Synonyms	PRAK
Function	Tumor suppressor serine/threonine-protein kinase involved in mTORC1

	signaling and post-transcriptional regulation. Phosphorylates FOXO3, ERK3/MAPK6, ERK4/MAPK4, HSP27/HSPB1, p53/TP53 and RHEB. Acts as a tumor suppressor by mediating Ras-induced senescence and phosphorylating p53/TP53. Involved in post-transcriptional regulation of MYC by mediating phosphorylation of FOXO3: phosphorylation of FOXO3 leads to promote nuclear localization of FOXO3, enabling expression of miR-34b and miR-34c, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent MYC translation. Acts as a negative regulator of mTORC1 signaling by mediating phosphorylation and inhibition of RHEB. Part of the atypical MAPK signaling via its interaction with ERK3/MAPK6 or ERK4/MAPK4: the precise role of the complex formed with ERK3/MAPK6 or ERK4/MAPK4 is still unclear, but the complex follows a complex set of phosphorylation events: upon interaction with atypical MAPK (ERK3/MAPK6 or ERK4/MAPK4), ERK3/MAPK6 (or ERK4/MAPK4) is phosphorylated and then mediates phosphorylation and activation of MAPKAPK5, which in turn phosphorylates ERK3/MAPK6 (or ERK4/MAPK4). Mediates phosphorylation of HSP27/HSPB1 in response to PKA/PRKACA stimulation, inducing F-actin rearrangement.
Cellular Location	Cytoplasm. Nucleus. Note=Translocates to the cytoplasm following phosphorylation and activation. Interaction with ERK3/MAPK6 or ERK4/MAPK4 and phosphorylation at Thr-182, activates the protein kinase activity, followed by translocation to the cytoplasm Phosphorylation by PKA/PRKACA at Ser-115 also induces nuclear export
Tissue Location	Expressed ubiquitously.

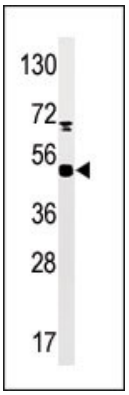
Background

The protein encoded by this gene is a member of the serine/threonine kinase family. In response to cellular stress and proinflammatory cytokines, this kinase is activated through its phosphorylation by MAP kinases including MAPK1/ERK, MAPK14/p38-alpha, and MAPK11/p38-beta. In vitro, this kinase phosphorylates heat shock protein HSP27 at its physiologically relevant sites.

References

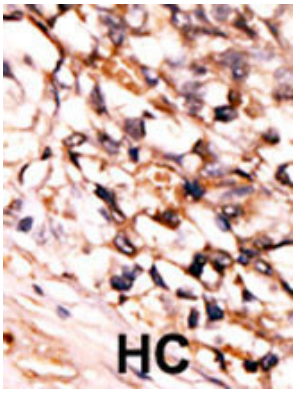
New, L., et al., EMBO J. 17(12):3372-3384 (1998).
Ni, H., et al., Biochem. Biophys. Res. Commun. 243(2):492-496 (1998).

Images



The anti-Phospho-MAPKAPK5-S93 Pab (Cat. #AP3151a) is used in Western blot to detect Phospho-MAPKAPK5-S93 in mouse heart tissue lysate. PAD4(arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was



peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Abrogation of microcystin cytotoxicity by MAP kinase inhibitors and N-acetyl cysteine is confounded by OATPIB1 uptake activity inhibition.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.