

# PRAK (MAPKAPK5) Antibody (T182)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7216a

## Product Information

---

<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">Q8IW41</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB13233
<b>Calculated MW</b>	54220
<b>Antigen Region</b>	160-189

## Additional Information

---

<b>Gene ID</b>	8550
<b>Other Names</b>	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
<b>Target/Specificity</b>	This PRAK(MAPKAPK5) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 160-189 amino acids from human PRAK(MAPKAPK5).
<b>Dilution</b>	WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	PRAK (MAPKAPK5) Antibody (T182) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

---

<b>Name</b>	MAPKAPK5
<b>Synonyms</b>	PRAK
<b>Function</b>	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.

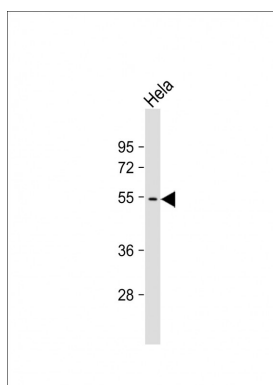
## Background

MAPKAPK5 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

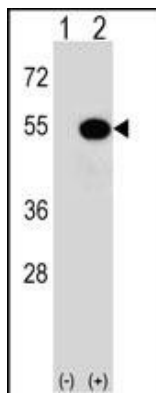
New, L., et al., EMBO J. 17(12):3372-3384 (1998).  
 Ni, H., et al., Biochem. Biophys. Res. Commun. 243(2):492-496 (1998).  
 Sudo T., Biochem. Biophys. Res. Commun. 269:521-525(2000).

## Images



Anti-MAPKAPK5 Antibody (T182) at 1:1000 dilution + HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of MAPKAPK5 (arrow) using rabbit



polyclonal MAPKAPK5 Antibody (T182) (Cat.#AP7216a).  
293 cell lysates (2 ug/lane) either nontransfected (Lane 1)  
or transiently transfected (Lane 2) with the MAPKAPK5  
gene.

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