

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide
Synthetic peptide
Catalog # BP7216a**Specification**

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - Product InformationPrimary Accession [Q8IW41](#)**PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - 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

The synthetic peptide sequence used to generate the antibody [AP7216a](/product/products/AP7216a) was selected from the T182 region of human MAPKAPK5. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - 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.

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - Images**PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - 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.

PRAK (MAPKAPK5) Antibody (T182) Blocking peptide - 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).