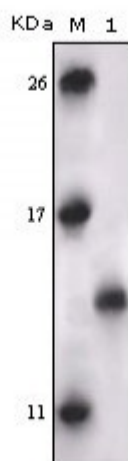


Anti-PRAK antibody



Description	Mouse monoclonal to PRAK.
Model	STJ98335
Host	Mouse
Reactivity	Human
Applications	ELISA, IHC, WB
Immunogen	Purified recombinant fragment of PRAK expressed in E. Coli.
Gene ID	8550
Gene Symbol	MAPKAPK5
Dilution range	WB 1:500-1:2000IHC 1:200-1:1000ELISA 1:10000
Specificity	PRAK Monoclonal Antibody detects endogenous levels of PRAK protein.
Tissue Specificity	Expressed ubiquitously.
Purification	Affinity purification
Clone ID	7H10B4
Note	For Research Use Only (RUO).
Protein Name	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
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6889OMIM:606723
Alternative 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
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 Localization	Cytoplasm. Nucleus. 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.
Post-translational Modifications	Phosphorylated on Thr-182 ERK3/MAPK6 or ERK4/MAPK4; which is the regulatory phosphorylation site and is located on the T-loop/loop 12, leading to activation. Phosphorylation at Thr-182 by p38-alpha/MAPK14, p38-beta/MAPK11 is subject to debate. Phosphorylated at Ser-115 by PKA/PRKACA, leading to localization to the cytoplasm. Autophosphorylated .