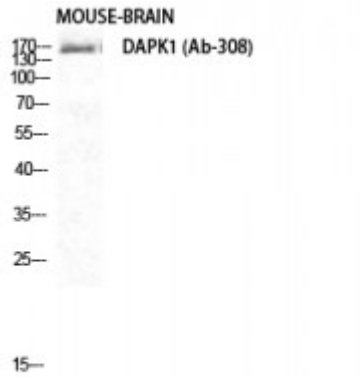
Anti-DAPK1 antibody



Description	Rabbit polyclonal to DAPK1.

Model	STJ92652
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human DAPK1 around the non-phosphorylation site of S308.
Immunogen Region	250-330 aa
Gene ID	1612
Gene Symbol	DAPK1
Dilution range	WB 1:1000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:5000
Specificity	DAPK1 Polyclonal Antibody detects endogenous levels of DAPK1 protein.
Tissue Specificity	Isoform 2 is expressed in normal intestinal tissue as well as in colorectal carcinomas.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Death-associated protein kinase 1 DAP kinase 1
Molecular Weight	160.286 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:2674OMIM:600831
Alternative Names	Death-associated protein kinase 1 DAP kinase 1
Function	Calcium/calmodulin-dependent serine/threonine kinase involved in multiple cellular signaling pathways that trigger cell survival, apoptosis, and autophagy. Regulates both type I apoptotic and type II autophagic cell deaths signal, depending on the cellular setting. The former is caspase-dependent, while the latter is caspase-independent and is characterized by the accumulation of autophagic vesicles. Phosphorylates PIN1 resulting in inhibition of its catalytic activity, nuclear localization, and cellular function. Phosphorylates TPM1, enhancing stress fiber formation in endothelial cells. Phosphorylates STX1A and significantly decreases its binding to STXBP1. Phosphorylates PRKD1 and regulates JNK signaling by binding and activating PRKD1 under oxidative stress. Phosphorylates BECN1, reducing its interaction with BCL2 and BCL2L1 and promoting the induction of autophagy. Phosphorylates TSC2, disrupting the TSC1-TSC2 complex and stimulating mTORC1 activity in a growth factor-dependent pathway. Phosphorylates RPS6, MYL9 and DAPK3. Acts as a signaling amplifier of NMDA receptors at extrasynaptic sites for mediating brain damage in stroke. Cerebral ischemia recruits DAPK1 into the NMDA receptor complex and it phosphorylates GRINB at Ser-1303 inducing injurious Ca(2+) influx through NMDA receptor channels, resulting in an irreversible neuronal death. Required together with DAPK3 for phosphorylation of RPL13A upon interferon-gamma activation which is causing RPL13A involvement in transcript-selective translation inhibition.; Isoform 2 cannot induce apoptosis but can induce membrane blebbing.
Sequence and Domain Family	The autoinhibitory domain sterically blocks the substrate peptide-binding site by making both hydrophobic and electrostatic contacts with the kinase core.
Cellular Localization	Isoform 1: Cytoplasm. Cytoplasm, cytoskeleton. Colocalizes with MAP1B in the microtubules and cortical actin fibers.. Isoform 2: Cytoplasm. Cytoplasm, cytoskeleton.
Post-translational Modifications	Ubiquitinated by the BCR(KLHL20) E3 ubiquitin ligase complex, leading to its degradation by the proteasome. Removal of the C-terminal tail of isoform 2 (corresponding to amino acids 296-337 of isoform 2) by proteolytic cleavage stimulates maximally its membrane-blebbing function. In response to mitogenic stimulation (PMA or EGF), phosphorylated at Ser-289; phosphorylation suppresses DAPK1 pro-apoptotic function. Autophosphorylation at Ser-308 inhibits its catalytic activity. Phosphorylation at Ser-734 by MAPK1 increases its catalytic activity and promotes cytoplasmic retention of MAPK1. Endoplasmic-stress can cause dephosphorylation at Ser-308.

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