

DAPK1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7217b

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P53355
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3033
Calculated MW	160046
Antigen Region	1360-1389

Additional Information

Gene ID	1612
Other Names	Death-associated protein kinase 1, DAP kinase 1, DAPK1, DAPK
Target/Specificity	This DAPK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1360-1389 amino acids from the C-terminal region of human DAPK1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	DAPK1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DAPK1
Synonyms	DAPK
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.

Cellular Location

[Isoform 1]: Cytoplasm. Cytoplasm, cytoskeleton. Note=Colocalizes with MAP1B in the microtubules and cortical actin fibers

Tissue Location

Isoform 2 is expressed in normal intestinal tissue as well as in colorectal carcinomas.

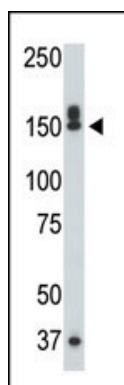
Background

Death-associated protein kinase 1 is a positive mediator of gamma-interferon induced programmed cell death (apoptosis). DAPK1 encodes a structurally unique 160-kD calmodulin dependent serine-threonine kinase that carries 8 ankyrin repeats and 2 putative P-loop consensus sites. It is a tumor suppressor candidate.

References

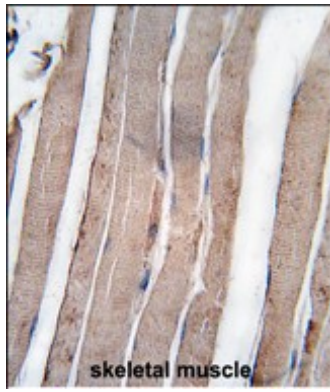
Shohat, G., et al., J. Biol. Chem. 276(50):47460-47467 (2001).
Inbal, B., et al., Mol. Cell. Biol. 20(3):1044-1054 (2000).
Deiss, L.P., et al., Genes Dev. 9(1):15-30 (1995).

Images

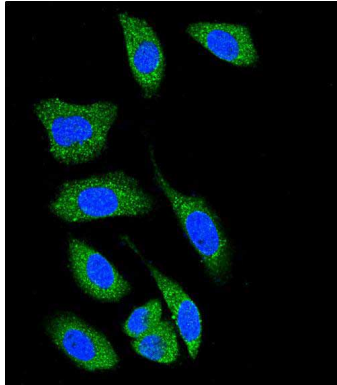


The DAPK1 polyclonal antibody (Cat. #AP7217b) is used in Western blot to detect DAPK1 in mouse liver tissue lysate.

Formalin-fixed and paraffin-embedded human skeletal



muscle tissue reacted with DAPK1 antibody (C-term) (Cat.#AP7217b), 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.



Confocal immunofluorescent analysis of DAP Kinase 1 (DAPK1) Antibody (C-term) (Cat. #AP7217b) with A549 cell followed by Alexa Fluor® 489-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).

Citations

- [Hyperthermia depletes Oct4 in mouse blastocysts and stem cells](#)
- [Silencing DNA methyltransferase 1 \(DNMT1\) inhibits proliferation, metastasis and invasion in ESCC by suppressing methylation of RASSF1A and DAPK.](#)

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