

**hDAPK1-T1316**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM8730b**

**Specification**

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**hDAPK1-T1316 - Product Information**

Application	WB,E
Primary Accession	<a href="#">P53355</a>
Reactivity	Human, Mouse
Host	Mouse
Clonality	monoclonal
Isotype	IgG2a, $\kappa$
Calculated MW	160046

**hDAPK1-T1316 - Additional Information**

**Gene ID** 1612

**Other Names**

Death-associated protein kinase 1, DAP kinase 1, 2.7.11.1, DAPK1, DAPK

**Target/Specificity**

This antibody is generated from a mouse immunized with a KLH conjugated synthetic peptide between amino acids from human.

**Dilution**

WB~~1:4000

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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**

hDAPK1-T1316 is for research use only and not for use in diagnostic or therapeutic procedures.

**hDAPK1-T1316 - 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<sup>2+</sup> 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

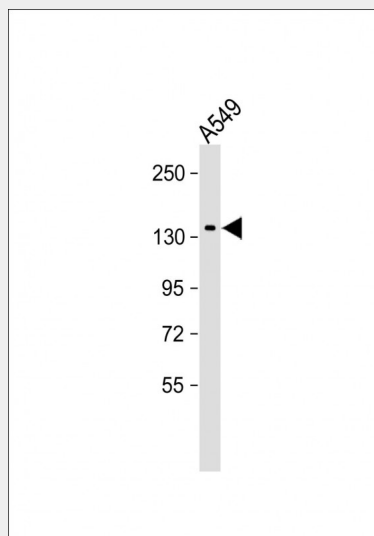
Isoform 2 is expressed in normal intestinal tissue as well as in colorectal carcinomas.

## hDAPK1-T1316 - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## hDAPK1-T1316 - Images



Anti-DAPK1 Antibody T1316 at 1:4000 dilution + A549 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 160 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### **hDAPK1-T1316 - Background**

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.

### **hDAPK1-T1316 - References**

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Feinstein E., et al. Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.  
Ota T., et al. *Nat. Genet.* 36:40-45(2004).  
Bechtel S., et al. *BMC Genomics* 8:399-399(2007).  
Humphray S.J., et al. *Nature* 429:369-374(2004).