

Anti-DAP Kinase 3 Antibody

Rabbit polyclonal antibody to DAP Kinase 3
Catalog # AP61290

Product Information

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|-------------------|------------------------|
| Application | WB, IHC |
| Primary Accession | O43293 |
| Other Accession | O54784 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 52536 |

Additional Information

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| Gene ID | 1613 |
| Other Names | ZIPK; Death-associated protein kinase 3; DAP kinase 3; DAP-like kinase; Dlk; MYPT1 kinase; Zipper-interacting protein kinase; ZIP-kinase |
| Target/Specificity | Recognizes endogenous levels of DAP Kinase 3 protein. |
| Dilution | WB~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) |
| Format | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide. |
| Storage | Store at -20 °C.Stable for 12 months from date of receipt |

Protein Information

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|----------|---|
| Name | DAPK3 |
| Synonyms | ZIPK |
| Function | Serine/threonine kinase which is involved in the regulation of apoptosis, autophagy, transcription, translation and actin cytoskeleton reorganization. Involved in the regulation of smooth muscle contraction. Regulates both type I (caspase-dependent) apoptotic and type II (caspase-independent) autophagic cell deaths signal, depending on the cellular setting. Involved in regulation of starvation-induced autophagy. Regulates myosin phosphorylation in both smooth muscle and non-muscle cells. In smooth muscle, regulates myosin either directly by phosphorylating MYL12B and MYL9 or through inhibition of smooth muscle myosin phosphatase (SMPP1M) via phosphorylation of PPP1R12A; the inhibition of SMPP1M functions to enhance muscle responsiveness to Ca(2+) and promote a contractile state. |

Phosphorylates MYL12B in non-muscle cells leading to reorganization of actin cytoskeleton. Isoform 2 can phosphorylate myosin, PPP1R12A and MYL12B. Overexpression leads to condensation of actin stress fibers into thick bundles. Involved in actin filament focal adhesion dynamics. The function in both reorganization of actin cytoskeleton and focal adhesion dissolution is modulated by RhoD. Positively regulates canonical Wnt/beta-catenin signaling through interaction with NLK and TCF7L2. Phosphorylates RPL13A on 'Ser-77' upon interferon-gamma activation which is causing RPL13A release from the ribosome, RPL13A association with the GAIT complex and its subsequent involvement in transcript-selective translation inhibition. Enhances transcription from AR-responsive promoters in a hormone- and kinase-dependent manner. Involved in regulation of cell cycle progression and cell proliferation. May be a tumor suppressor.

Cellular Location

Nucleus. Nucleus, PML body {ECO:0000250|UniProtKB:O54784}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:O54784}. Chromosome, centromere. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Midbody Note=Predominantly localizes to the cytoplasm but can shuttle between the nucleus and cytoplasm; cytoplasmic localization is promoted by phosphorylation at Thr-299 and involves Rho/Rock signaling [Isoform 2]: Nucleus. Cytoplasm

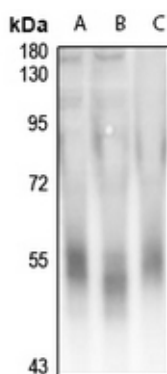
Tissue Location

Widely expressed. Isoform 1 and isoform 2 are expressed in the bladder smooth muscle.

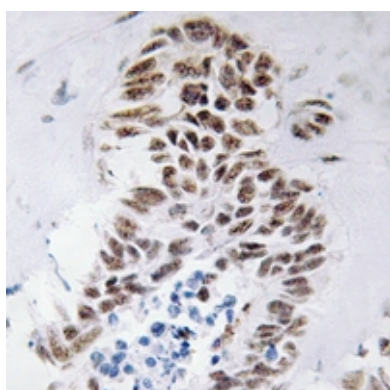
Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human DAP Kinase 3. The exact sequence is proprietary.

Images



Western blot analysis of DAP Kinase 3 expression in A549 (A), MCF7 (B), mouse embryo (C) whole cell lysates.



Immunohistochemical analysis of DAP Kinase 3 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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