10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DAPK3 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7125b

Specification

DAPK3 Antibody (Center) Blocking Peptide - Product Information

Primary Accession O43293

DAPK3 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 1613

Other Names
Death-associated protein kinase 3, DAP kinase 3, DAP-like kinase, Dlk, MYPT1 kinase, Zipper-interacting protein kinase, ZIP-kinase, DAPK3, ZIPK

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7125b was selected from the Center region of humanPK3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DAPK3 Antibody (Center) Blocking Peptide - Protein Information

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. Cytoplasm 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.

DAPK3 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

DAPK3 Antibody (Center) Blocking Peptide - Images

DAPK3 Antibody (Center) Blocking Peptide - Background

Death-associated protein kinase 3 (DAPK3) induces morphological changes in apoptosis when overexpressed in mammalian cells. These results suggest that DAPK3 may play a role in the induction of apoptosis. DAPK3 fors a homodimer or heterodimers with ATF4. Both interactions require an intact leucine zipper domain and oligomerization is required for full enzymatic activity. DAPK3 Also binds to DAXX and PAWR, possibly in a ternary complex which plays a role in caspase activation. This protein interacts with AATF and CDC5L.

DAPK3 Antibody (Center) Blocking Peptide - References

Endo, A., et al., J. Biol. Chem. 279(40):42055-42061 (2004).Kawai, T., et al., Mol. Cell. Biol. 23(17):6174-6186 (2003).Preuss, U., et al., Nucleic Acids Res. 31(3):878-885 (2003).Page, G., et al., Oncogene 18(51):7265-7273 (1999).Murata-Hori, M., et al., FEBS Lett. 451(1):81-84 (1999).