

DAPK2 (N-14): sc-10081



The Power to Question

BACKGROUND

Death-associated protein kinase 2 (DAPK2), also designated death-associated protein kinase-related protein-1 (DRP-1), is a calcium/calmodulin-regulated serine/threonine kinase that binds to calmodulin, undergoes autophosphorylation in response to an increase in cellular calcium concentration, and phosphorylated myosin light chain (MLC) as an exogenous substrate. DAPK2 is expressed in heart, lung, and skeletal muscle and is localized to the cytoplasm. DAPK2 displays significant homology to DAP-kinase, which mediates interferon (IFN)- γ -induced apoptosis in HeLa. Subsequently, DAPK2 is thought to function as a possible tumor suppressor gene.

REFERENCES

1. Feinstein, E., et al. 1995. Assignment of DAP1 and DAPK—genes that positively mediate programmed cell death triggered by IFN- γ —to chromosome regions 5p12.2 and 9q34.1, respectively. *Genomics* 29: 305-307.
2. Sakagami, H., et al. 1997. Molecular cloning and developmental expression of a rat homologue of death-associated protein kinase in the nervous system. *Brain Res. Mol. Brain Res.* 52: 249-256.
3. Inbal, B., et al. 1997. DAP kinase links the control of apoptosis to metastasis. *Nature* 390: 180-184.
4. Kawai, T., et al. 1998. ZIP kinase, a novel serine/threonine kinase which mediates apoptosis. *Mol. Cell. Biol.* 18: 1642-1651.
5. Schumacher, A.M., et al. 2002. DAPK catalytic activity in the hippocampus increases during the recovery phase in an animal model of brain hypoxic-ischemic injury. *Biochim. Biophys. Acta* 1600: 128-137.
6. Jin, Y., et al. 2002. A death-associated protein kinase (DAPK)-interacting protein, DIP-1, is an E3 ubiquitin ligase that promotes tumor necrosis factor-induced apoptosis and regulates the cellular levels of DAPK. *J. Biol. Chem.* 277: 46980-46986.
7. Kim, W.S., et al. 2003. Promoter methylation and down-regulation of DAPK is associated with gastric atrophy. *Int. J. Mol. Med.* 12: 827-830.
8. Jang, W.S., et al. 2003. Expression of a novel type I keratin, DAPK-1 in the dorsal aorta and pronephric duct of the zebrafish embryos. *Gene* 312: 145-150.
9. Narayan, G., et al. 2003. Frequent promoter methylation of CDH1, DAPK, RARB, and HIC1 genes in carcinoma of cervix uteri: its relationship to clinical outcome. *Mol. Cancer* 2: 24.

CHROMOSOMAL LOCATION

Genetic locus: DAPK2 (human) mapping to 15q22.31; Dapk2 (mouse) mapping to 9 C.

SOURCE

DAPK2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of DAPK2 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10081 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DAPK2 (N-14) is recommended for detection of DAPK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DAPK2 (N-14) is also recommended for detection of DAPK2 in additional species, including equine.

Suitable for use as control antibody for DAPK2 siRNA (h): sc-38978, DAPK2 siRNA (m): sc-38979, DAPK2 shRNA Plasmid (h): sc-38978-SH, DAPK2 shRNA Plasmid (m): sc-38979-SH, DAPK2 shRNA (h) Lentiviral Particles: sc-38978-V and DAPK2 shRNA (m) Lentiviral Particles: sc-38979-V.

Molecular Weight of DAPK2: 42 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **DAPK2 (X15): sc-100371**, our highly recommended monoclonal alternative to DAPK2 (N-14).