SANTA CRUZ BIOTECHNOLOGY, INC.

DAPK2 (X15): sc-100371

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 phosphorylates 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

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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.
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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 downregulation 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, DAPK1 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.

SOURCE

DAPK2 (X15) is a mouse monoclonal antibody raised against recombinant DAPK2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DAPK2 (X15) is recommended for detection of DAPK2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

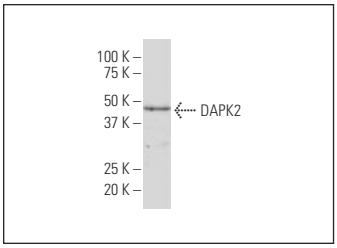
Molecular Weight of DAPK2: 42 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



DAPK2 (X15): sc-100371. Western blot analysis of DAPK2 expression in A-431 whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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