SANTA CRUZ BIOTECHNOLOGY, INC.

DAPK (C-20): sc-8163

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

DAP (death associated protein) kinase and ZIP kinase are members of a novel protein kinase family, the members of which have the capacity to mediate apoptosis through their catalytic activities. DAP kinase contains a "death domain" and has been shown to mediate gamma interferon-induced apoptosis. The introduction of DAP kinase into highly metastatic carcinoma clones lacking DAP kinase expression was shown to result in the suppression of metastasis, thus linking suppression of apoptosis to metastasis. ZIP kinase contains a leucine zipper domain, which is necessary for homodimerization and for interaction with other leucine zipper proteins. ZIP kinase dimerizes with ATF-4, an ATF/CREB transcription factor family member that contains a leucine zipper. Overexpression of ZIP kinase was shown to result in morphological changes associated with apoptosis in NIH/3T3 cells.

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.

CHROMOSOMAL LOCATION

Genetic locus: DAPK1 (human) mapping to 9q21.33; Dapk1 (mouse) mapping to 13 B2.

SOURCE

DAPK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DAPK of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-8163 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DAPK (C-20) is recommended for detection of DAP-kinase of mouse, rat and 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)], 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).

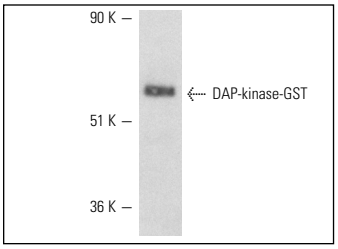
DAPK (C-20) is also recommended for detection of DAP-kinase in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for DAPK siRNA (h): sc-38976, DAPK siRNA (m): sc-38977, DAPK shRNA Plasmid (h): sc-38976-SH, DAPK shRNA Plasmid (m): sc-38977-SH, DAPK shRNA (h) Lentiviral Particles: sc-38976-V and DAPK shRNA (m) Lentiviral Particles: sc-38977-V.

Molecular Weight of DAPK: 160 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410.

DATA



DAPK (C-20): sc-8163. Western blot analysis of GST-tagged human recombinant DAP-kinase.

SELECT PRODUCT CITATIONS

1. Rennier, K. and Ji, J.Y. 2012. Shear stress regulates expression of death-associated protein kinase in suppressing TNFα-induced endothelial apoptosis. J. Cell. Physiol. 227: 2398-2411.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **DAPK (17): sc-136286**, our highly recommended monoclonal alternative to DAPK (C-20).