

# DRAK1 (3064C6a): sc-81573

## 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. DRAK1 (DAP kinase-related apoptosis-inducing protein kinase 1) and DRAK2 are DAP kinase related proteins. DRAK1 and DRAK2 are localized to the nucleus, and overexpression of both DRAK proteins in NIH/3T3 cells induces morphological changes associated with apoptosis.

## REFERENCES

- Hai, T.W., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. *Genes Dev.* 3: 2083-2090.
- Deiss, L.P., et al. 1995. Identification of a novel serine/threonine kinase and a novel 15-kD protein as potential mediators of the  $\gamma$  interferon-induced cell death. *Genes Dev.* 9: 15-30.
- 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.
- Inbal, B., et al. 1997. DAP kinase links the control of apoptosis to metastasis. *Nature* 390: 180-184.
- Kawai, T., et al. 1998. ZIP kinase, a novel serine/threonine kinase which mediates apoptosis. *Mol. Cell. Biol.* 18: 1642-1651.
- Sanjo, H., et al. 1998. DRAKs, novel serine/threonine kinases related to death-associated protein kinase that trigger apoptosis. *J. Biol. Chem.* 273: 29066-29071.

## CHROMOSOMAL LOCATION

Genetic locus: STK17A (human) mapping to 7p13.

## SOURCE

DRAK1 (3064C6a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of DRAK1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.1% stabilizer protein.

## STORAGE

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

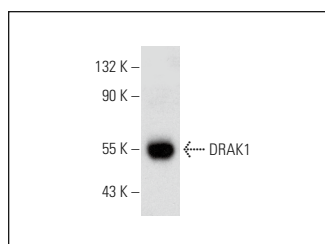
## APPLICATIONS

DRAK1 (3064C6a) is recommended for detection of DRAK1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

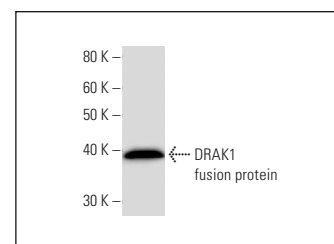
Suitable for use as control antibody for DRAK1 siRNA (h): sc-38980, DRAK1 shRNA Plasmid (h): sc-38980-SH and DRAK1 shRNA (h) Lentiviral Particles: sc-38980-V.

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

## DATA



DRAK1 (3064C6a): sc-81573. Western blot analysis of DRAK1 expression in A-431 whole cell lysate.



DRAK1 (3064C6a): sc-81573. Western blot analysis of human recombinant DRAK1 fusion protein.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.