

## DAP-3 (D-4): sc-398416

### BACKGROUND

The death-associated protein 3 (DAP-3), is a nucleotide-binding protein that contains a potential P-loop motif. It is a positive mediator of programmed cell death; overexpressed intact full-length protein is required in order to induce apoptosis. DAP-3 functions downstream of its receptor signaling complex and its death promoting effects depend on caspase activity. It also interacts with the glucocorticoid receptor (GR), where its main interaction domain is the amino-terminal region, which acts in a dominant-negative fashion to protect cells from apoptosis. DAP-3 protein may also play a role in modulating the cytoplasmic GR/HSP 90 complex. It is conserved at the functional, as well as the structural level, and is ubiquitously expressed in highly proliferative epithelial compartments of various tissues. Unlike a number of other proteins, DAP-3 retains its mitochondrial localization during the induction of apoptosis.

### REFERENCES

1. Kissil, J.L., et al. 1995. Isolation of DAP-3, a novel mediator of interferon- $\gamma$ -induced cell death. *J. Biol. Chem.* 270: 27932-27936.
2. Levy-Strumpf, N., et al. 1998. Death associated proteins (DAPs): from gene identification to the analysis of their apoptotic and tumor suppressive functions. *Oncogene* 17: 3331-3340.
3. Kissil, J.L., et al. 1999. Structure-function analysis of an evolutionary conserved protein, DAP-3, which mediates TNF $\alpha$ - and FAS-induced cell death. *EMBO J.* 18: 353-362.
4. Kimchi, A. 1999. DAP kinase and DAP-3: novel positive mediators of apoptosis. *Ann. Rheum. Dis.* 58: 114-119.
5. Hulkko, S.M., et al. 2000. The pro-apoptotic protein death-associated protein 3 (DAP-3) interacts with the glucocorticoid receptor and affects the receptor function. *Biochem. J.* 349: 885-893.
6. Berger, T., et al. 2000. The apoptosis mediator mDAP-3 is a novel member of a conserved family of mitochondrial proteins. *J. Cell Sci.* 113: 3603-3612.
7. Mariani, L., et al. 2001. Death-associated protein 3 (DAP-3) is overexpressed in invasive glioblastoma cells *in vivo* and in glioma cell lines with induced motility phenotype *in vitro*. *Clin. Cancer Res.* 7: 2480-2489.

### CHROMOSOMAL LOCATION

Genetic locus: DAP3 (human) mapping to 1q22.

### SOURCE

DAP-3 (D-4) is a mouse monoclonal antibody raised against amino acids 149-318 mapping within an internal region of DAP-3 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### STORAGE

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

### APPLICATIONS

DAP-3 (D-4) is recommended for detection of DAP-3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for DAP-3 siRNA (h): sc-37381, DAP-3 shRNA Plasmid (h): sc-37381-SH and DAP-3 shRNA (h) Lentiviral Particles: sc-37381-V.

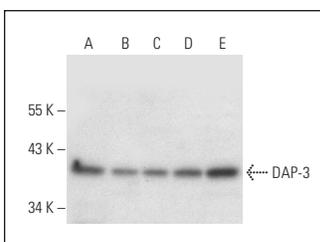
Molecular Weight of DAP-3: 46 kDa.

Positive Controls: T98G cell lysate: sc-2294, U-251-MG whole cell lysate: sc-364176 or U-937 cell lysate: sc-2239.

### RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### DATA



DAP-3 (D-4): sc-398416. Western blot analysis of DAP-3 expression in U-937 (A), U-87 MG (B), HeLa (C), T98G (D) and U-251-MG (E) whole cell lysates.

### 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.