

AIP1 (E-8): sc-514766



The Power to Question

BACKGROUND

AIP1 (ASK-interacting protein 1), also known as DAB2IP (DAB2 interacting protein), is a 1,189 amino acid protein that localizes to both the membrane and the cytoplasm and contains one Ras GAP domain, one PH domain and one C2 domain. Expressed at low levels in prostate tissue, AIP1 functions as a Ras GTPase-activating protein that interacts with ASK 1 and, via this interaction, disrupts the association of ASK 1 with an inhibitory 14-3-3 complex, thereby allowing free ASK 1 to function within the cell. AIP1 exists as multiple alternatively spliced isoforms and is downregulated in prostate cancer tissue, suggesting a role in tumor suppression. Chromosomal aberrations in the gene encoding AIP1 are associated with acute myeloid leukemia (AML), implicating a role for AIP1 fusion proteins in tumorigenesis.

REFERENCES

1. Chen, H., et al. 2002. Differential regulation of the human gene DAB2IP in normal and malignant prostatic epithelia: cloning and characterization. *Genomics* 79: 573-581.
2. Wang, Z., et al. 2002. The mechanism of growth-inhibitory effect of DOC-2/DAB2 in prostate cancer. Characterization of a novel GTPase-activating protein associated with N-terminal domain of DOC-2/DAB2. *J. Biol. Chem.* 277: 12622-12631.
3. Chen, H., et al. 2003. Epigenetic regulation of a novel tumor suppressor gene (hDAB2IP) in prostate cancer cell lines. *J. Biol. Chem.* 278: 3121-3130.
4. Zhang, R., et al. 2003. AIP1 mediates TNF α -induced ASK 1 activation by facilitating dissociation of ASK 1 from its inhibitor 14-3-3. *J. Clin. Invest.* 111: 1933-1943.
5. Zhang, H., et al. 2004. AIP1/DAB2IP, a novel member of the Ras GAP family, transduces TRAF2-induced ASK 1-JNK activation. *J. Biol. Chem.* 279: 44955-44965.
6. Yano, M., et al. 2005. Aberrant promoter methylation of human DAB2 interactive protein (hDAB2IP) gene in lung cancers. *Int. J. Cancer* 113: 59-66.

CHROMOSOMAL LOCATION

Genetic locus: DAB2IP (human) mapping to 9q33.2; Dab2ip (mouse) mapping to 2 B.

SOURCE

AIP1 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 934-956 within an internal region of AIP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514766 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

AIP1 (E-8) is recommended for detection of AIP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 AIP1 siRNA (h): sc-72468, AIP1 siRNA (m): sc-72469, AIP1 shRNA Plasmid (h): sc-72468-SH, AIP1 shRNA Plasmid (m): sc-72469-SH, AIP1 shRNA (h) Lentiviral Particles: sc-72468-V and AIP1 shRNA (m) Lentiviral Particles: sc-72469-V.

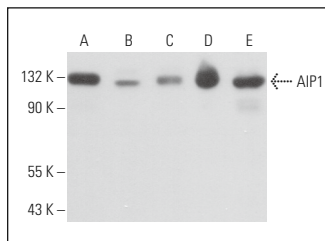
Molecular Weight of AIP1: 110 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MIA PaCa-2 cell lysate: sc-2285 or Hep G2 cell lysate: sc-2227.

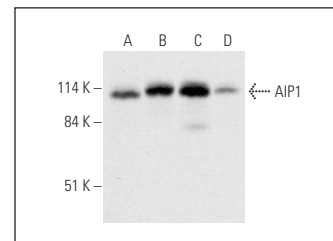
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



AIP1 (E-8): sc-514766. Western blot analysis of AIP1 expression in NIH/3T3 (A), BC₃H1 (B), A-10 (C), 3T3-L1 (D) and C2C12 (E) whole cell lysates.



AIP1 (E-8): sc-514766. Western blot analysis of AIP1 expression in HeLa (A), Hep G2 (B), MIA PaCa-2 (C) and PANC-1 (D) whole cell lysates.

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.