SANTA CRUZ BIOTECHNOLOGY, INC.

AIP1 (F-3): sc-365921

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

AIP1 (F-3) is a mouse monoclonal antibody raised against amino acids 642-828 mapping within an internal region of AIP1 of human origin.

PRODUCT

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

AIP1 (F-3) is available conjugated to agarose (sc-365921 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365921 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365921 PE), fluorescein (sc-365921 FITC), Alexa Fluor® 488 (sc-365921 AF488), Alexa Fluor® 546 (sc-365921 AF546), Alexa Fluor® 594 (sc-365921 AF594) or Alexa Fluor® 647 (sc-365921 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365921 AF680) or Alexa Fluor® 790 (sc-365921 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

AIP1 (F-3) 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 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).

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.

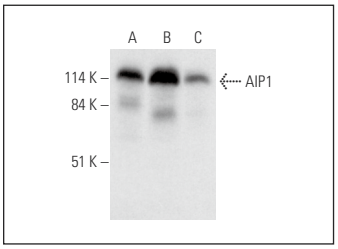
Molecular Weight of AIP1: 110 kDa.

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

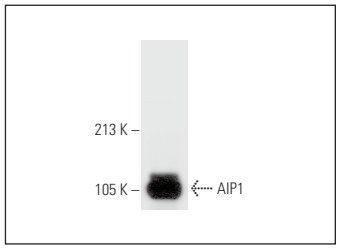
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (F-3): sc-365921. Western blot analysis of AIP1 expression in Hep G2 (**A**), MIA PaCa-2 (**B**) and PANC-1 (**C**) whole cell lysates.



AIP1 (F-3): sc-365921. Western blot analysis of AIP1 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Luo, X., et al. 2017. A RasGAP, DAB2IP, regulates lipid droplet homeostasis by serving as GAP toward RAB40C. Oncotarget 8: 85415-85427.
2. Wang, B., et al. 2017. DOC-2/DAB2 interactive protein regulates proliferation and mobility of nasopharyngeal carcinoma cells by targeting PI3K/Akt pathway. Oncol. Rep. 38: 317-324.
3. Li, Q., et al. 2022. AIP1 suppresses neovascularization by inhibiting the NOX4-induced NLRP3/NLRP6 imbalance in a murine corneal alkali burn model. Cell Commun. Signal. 20: 59.
4. Miller, A.L., et al. 2023. DAB2IP is a bifunctional tumor suppressor that regulates wildtype RAS and inflammatory cascades in KRAS mutant colon cancer. Cancer Res. 83: 1800-1814.

STORAGE

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

PROTOCOLS

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

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