SANTA CRUZ BIOTECHNOLOGY, INC.

AMID (B-6): sc-377120

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AMID (apoptosis-inducing factor (AIF)-like mitochondrion-associated inducer of death), also called p53-responsive gene 3 (PRG3), is a member of the FAD-dependent oxidoreductase family. AMID is a caspase independent pro-apoptotic flavoprotein with NAD(P)H oxidase activity localizing to the cytosol and associated with the outer mitochondrial membrane. AMID shares significant homology with AIF and NADH-oxidoreductases. It is expressed in most normal tissues and its expression is upregulated by p53. Two AMID isoforms exist due to alternative splicing. Isoform 1 is the full length protein and isoform 2 is missing amino acids 99-138. Isoform 2 also has an additional three amino acids inserted after residue 206. Overexpression of AMID leads to apoptosis.

CHROMOSOMAL LOCATION

Genetic locus: AIFM2 (human) mapping to 10q22.1; Aifm2 (mouse) mapping to 10 B4.

SOURCE

AMID (B-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of AMID 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.

AMID (B-6) is available conjugated to agarose (sc-377120 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377120 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377120 PE), fluorescein (sc-377120 FITC), Alexa Fluor® 488 (sc-377120 AF488), Alexa Fluor® 546 (sc-377120 AF546), Alexa Fluor® 594 (sc-377120 AF594) or Alexa Fluor® 647 (sc-377120 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377120 AF680) or Alexa Fluor® 790 (sc-377120 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

AMID (B-6) is recommended for detection of AMID 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 AMID siRNA (h): sc-72339, AMID siRNA (m): sc-72340, AMID shRNA Plasmid (h): sc-72339-SH, AMID shRNA Plasmid (m): sc-72340-SH, AMID shRNA (h) Lentiviral Particles: sc-72339-V and AMID shRNA (m) Lentiviral Particles: sc-72340-V.

Molecular Weight of AMID: 41 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HEK293 whole cell lysate: sc-45136 or A-673 cell lysate: sc-2414.

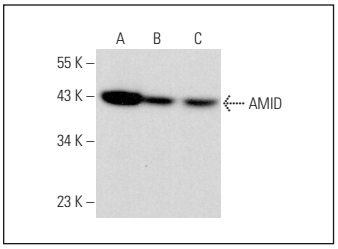
STORAGE

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.

DATA



AMID (B-6): sc-377120. Western blot analysis of AMID expression in Hep G2 (**A**), HEK293 (**B**) and A-673 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tao, Y.F., et al. 2015. Early B-cell factor 3 (EBF3) is a novel tumor suppressor gene with promoter hypermethylation in pediatric acute myeloid leukemia. J. Exp. Clin. Cancer Res. 34: 4.
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3. Ubellacker, J.M., et al. 2020. Lymph protects metastasizing melanoma cells from ferroptosis. Nature 585: 113-118.
4. Chen, D., et al. 2021. iPLA2β-mediated lipid detoxification controls p53-driven ferroptosis independent of GPX4. Nat. Commun. 12: 3644.
5. Zheng, J., et al. 2021. Sorafenib fails to trigger ferroptosis across a wide range of cancer cell lines. Cell Death Dis. 12: 698.
6. Mao, C., et al. 2021. DHODH-mediated ferroptosis defence is a targetable vulnerability in cancer. Nature 593: 586-590.
7. Yang, M., et al. 2022. Involvement of FSP1-CoQ10-NADH and GSH-GPx-4 pathways in retinal pigment epithelium ferroptosis. Cell Death Dis. 13: 468.
8. Pontel, L.B., et al. 2022. Acute lymphoblastic leukemia necessitates GSH-dependent ferroptosis defenses to overcome FSP1-epigenetic silencing. Redox Biol. 55: 102408.
9. Wu, S., et al. 2022. A ferroptosis defense mechanism mediated by glycerol-3-phosphate dehydrogenase 2 in mitochondria. Proc. Natl. Acad. Sci. USA 119: e2121987119.
10. Arslanbaeva, L., et al. 2022. UBIAD1 and CoQ10 protect melanoma cells from lipid peroxidation-mediated cell death. Redox Biol. 51: 102272.
11. Mishima, E., et al. 2022. A non-canonical vitamin K cycle is a potent ferroptosis suppressor. Nature. E-published.

PROTOCOLS

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