

AIP2 (A-3): sc-398090

BACKGROUND

Atrophin interacting proteins (AIPs) bind to atrophin-1 in the vicinity of the polyglutamine tract. The WW domain consists of 35-40 amino acids and is characterized by four well conserved aromatic residues, two of which are tryptophan. All five AIPs contain multiple WW domains and can be divided into two distinct classes. AIP1 and AIP3 (WWP3) are MAGUK-like multidomain proteins containing a guanylate kinase-like region, two WW domains and multiple PDZ domains. AIP2 (WWP2), AIP4 (itchy) and AIP5 (WWP1) are highly homologous, each having four WW domains and a HECT domain characteristic of ubiquitin ligases. These interactors are similar to isolated Huntingtin-interacting proteins, suggesting commonality of function between two families of proteins responsible for similar diseases.

CHROMOSOMAL LOCATION

Genetic locus: WWP2 (human) mapping to 16q22.1; Wwp2 (mouse) mapping to 8 D3.

SOURCE

AIP2 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 30-57 near the N-terminus of AIP2 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.

AIP2 (A-3) is available conjugated to agarose (sc-398090 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398090 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398090 PE), fluorescein (sc-398090 FITC), Alexa Fluor® 488 (sc-398090 AF488), Alexa Fluor® 546 (sc-398090 AF546), Alexa Fluor® 594 (sc-398090 AF594) or Alexa Fluor® 647 (sc-398090 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398090 AF680) or Alexa Fluor® 790 (sc-398090 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

AIP2 (A-3) is recommended for detection of AIP2 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 AIP2 siRNA (h): sc-40362, AIP2 siRNA (m): sc-40363, AIP2 shRNA Plasmid (h): sc-40362-SH, AIP2 shRNA Plasmid (m): sc-40363-SH, AIP2 shRNA (h) Lentiviral Particles: sc-40362-V and AIP2 shRNA (m) Lentiviral Particles: sc-40363-V.

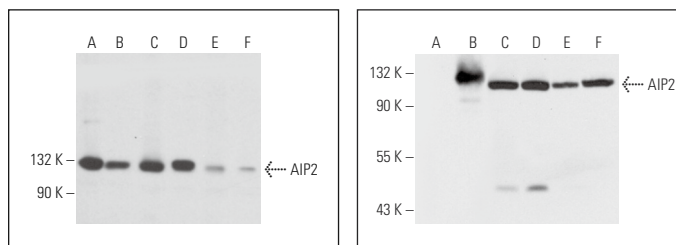
Molecular Weight of AIP2: 99-110 kDa.

Positive Controls: AIP2 (h2): 293T Lysate: sc-116898, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

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



AIP2 (A-3): sc-398090. Western blot analysis of AIP2 expression in K-562 (A), A549 (B), MDA-MB-435S (C), EOC 20 (D), C6 (E) and L6 (F) whole cell lysates.

AIP2 (A-3): sc-398090. Western blot analysis of AIP2 expression in non-transfected 293T: sc-117752 (A), human AIP2 transfected 293T: sc-116898 (B), K-562 (C), Jurkat (D), HeLa (E) and NIH/3T3 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zou, G., et al. 2018. MicroRNA-32 silences WWP2 expression to maintain the pluripotency of human amniotic epithelial stem cells and β islet-like cell differentiation. *Int. J. Mol. Med.* 41: 1983-1991.
2. Nielsen, C.P., et al. 2019. USP9X deubiquitylates DVL2 to regulate WNT pathway specification. *Cell Rep.* 28: 1074-1089.e5.
3. Fang, X., et al. 2021. Inhibiting DNA-PK induces glioma stem cell differentiation and sensitizes glioblastoma to radiation in mice. *Sci. Transl. Med.* 13: eabc7275.
4. Zhu, J., et al. 2023. Activation of E3 ubiquitin ligase WWP2 by non-receptor tyrosine kinase ACK1. *IUBMB Life* 75: 595-608.
5. Ding, L., et al. 2024. β -cell tpe1 orchestrates Insulin secretion and cell proliferation by promoting $G_{\alpha s}$ /cAMP signaling via USP5. *Adv. Sci.* 11: e2304940.

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.

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