

AIP4 (D-20): sc-11890

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 multi-domain 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.

REFERENCES

1. André, B. and Springael, J.Y. 1994. WWP, a new amino acid motif present in single or multiple copies in various proteins including dystrophin and the SH3-binding Yes-associated protein YAP65. *Biochem. Biophys. Res. Commun.* 205: 1201-1205.
2. Bork, P. and Sudol, M. 1994. The WW domain: a signalling site in dystrophin? *Trends Biochem. Sci.* 19: 531-533.

CHROMOSOMAL LOCATION

Genetic locus: ITCH (human) mapping to 20q11.22; Itch (mouse) mapping to 2 H1.

SOURCE

AIP4 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AIP4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11890 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AIP4 (D-20) is recommended for detection of AIP4 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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 AIP4 siRNA (h, m): sc-40364, AIP4 shRNA Plasmid (h, m): sc-40364-SH and AIP4 shRNA (h, m) Lentiviral Particles: sc-40364-V.

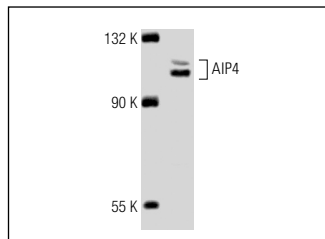
Molecular Weight of AIP4: 106 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, Caki-1 cell lysate: sc-2224 or SCC-4 whole cell lysate.

STORAGE

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

DATA



AIP4 (D-20): sc-11890. Western blot analysis of AIP4 expression in SCC-4 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wegierski, T., et al. 2006. The HECT ubiquitin ligase AIP4 regulates the cell surface expression of select TRP channels. *EMBO J.* 25: 5659-5669.
2. Omerovic, J., et al. 2007. The E3 ligase Aip4/Itch ubiquitinates and targets ErbB-4 for degradation. *FASEB J.* 21: 2849-2862.
3. Murata, E., et al. 2008. Interaction between cFLIP and Itch, a ubiquitin ligase, is obstructed in *Trypanosoma cruzi*-infected human cells. *Microbiol. Immunol.* 52: 539-543.
4. Edwards, T.L., et al. 2009. Endogenous spartin (SPG20) is recruited to endosomes and lipid droplets and interacts with the ubiquitin E3 ligases AIP4 and AIP5. *Biochem. J.* 423: 31-39.
5. Bhandari, D., et al. 2009. The E3 ubiquitin ligase atrophin interacting protein 4 binds directly to the chemokine receptor CXCR4 via a novel WW domain-mediated interaction. *Mol. Biol. Cell* 20: 1324-1339.
6. You, F., et al. 2009. PCBP2 mediates degradation of the adaptor MAVS via the HECT ubiquitin ligase AIP4. *Nat. Immunol.* 10: 1300-1308.

RESEARCH USE

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

PROTOCOLS

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