SANTA CRUZ BIOTECHNOLOGY, INC.

Arp-T2 (T-13): sc-104076

BACKGROUND

Actin-related proteins are classified into Arp subclasses according to their amino acid sequence similarity to Actin. Both Arps and Actin proteins have an ATPase domain, which catalyzes the decomposition of adenosine tri-phosphate (ATP) into adenosine diphosphate (ADP) and a free phosphate ion to release energy. Arp-T2 (actin-related protein T2), also known as Arp-M2, is a 377-amino acid structural cytoskeleton protein. Like other Arp family members, Arp-T2 contains an Actin-like ATP/ADP-binding pocket and two nuclear export signals. Although Arp-T2 shares 43% sequence identity with β-Actin, it contains several cysteine residues that are not found in other Actin family members. With significant expression in testis, Arp-T2 may play a role in spermatid formation.

REFERENCES

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2. Lecuyer, C., et al. 2000. Actin-binding properties and co-localization with Actin during spermiogenesis of mammalian sperm calicin. Biol. Reprod. 63: 1801-1810.
3. Harata, M., et al. 2001. Identification of two cDNAs for human Actin-related proteins (Arps) that have remarkable similarity to conventional Actin. Biochim. Biophys. Acta 1522: 130-133.
4. Heid, H., et al. 2002. Novel Actin-related proteins Arp-T1 and Arp-T2 as components of the cytoskeletal calyx of the mammalian sperm head. Exp. Cell Res. 279: 177-187.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608535. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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7. Hara, Y., et al. 2008. Nuclear localization of profilin III-ArpM1 complex in mouse spermiogenesis. FEBS Lett. 582: 2998-3004.
8. LeClaire, L.L., et al. 2008. Phosphorylation of the Arp2/3 complex is necessary to nucleate Actin filaments. J. Cell Biol. 182: 647-654.

CHROMOSOMAL LOCATION

Genetic locus: Actrt2 (mouse) mapping to 4 E2.

SOURCE

Arp-T2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Arp-T2 of mouse origin.

STORAGE

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

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-104076 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Arp-T2 (T-13) is recommended for detection of Arp-T2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Arp-T2 (T-13) is also recommended for detection of Arp-T2 in additional species, including equine.

Suitable for use as control antibody for Arp-T2 siRNA (m): sc-105091, Arp-T2 shRNA Plasmid (m): sc-105091-SH and Arp-T2 shRNA (m) Lentiviral Particles: sc-105091-V.

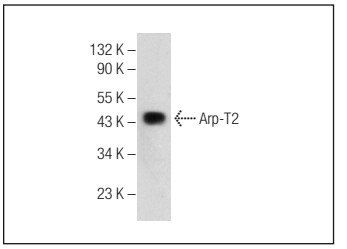
Molecular Weight (predicted) of Arp-T2: 42 kDa.

Molecular Weight (observed) of Arp-T2: 37/43 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Arp-T2 (T-13): sc-104076. Western blot analysis of Arp-T2 expression in T98G whole cell lysate.

RESEARCH USE

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