

# Arp-T2 (H-2): sc-515601

## 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 triphosphate (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  $\beta$ -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

1. Longo, F.J., et al. 1987. Basic proteins of the perinuclear theca of mammalian spermatozoa and spermatids: a novel class of cytoskeletal elements. *J. Cell Biol.* 105: 1105-1120.
2. Lecuyer, C., et al. 2000. Actin-binding properties and colocalization with actin during spermiogenesis of mammalian sperm calicins. *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.

## CHROMOSOMAL LOCATION

Genetic locus: ACTRT2 (human) mapping to 1p36.32; Actrt2 (mouse) mapping to 4 E2.

## SOURCE

Arp-T2 (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 126-145 within an internal region of Arp-T2 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Arp-T2 (H-2) is available conjugated to agarose (sc-515601 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515601 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515601 PE), fluorescein (sc-515601 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515601 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515601 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515601 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515601 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515601 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515601 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515601 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Arp-T2 (H-2) is recommended for detection of Arp-T2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Arp-T2 siRNA (h): sc-88470, Arp-T2 siRNA (m): sc-105091, Arp-T2 shRNA Plasmid (h): sc-88470-SH, Arp-T2 shRNA Plasmid (m): sc-105091-SH, Arp-T2 shRNA (h) Lentiviral Particles: sc-88470-V and Arp-T2 shRNA (m) Lentiviral Particles: sc-105091-V.

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

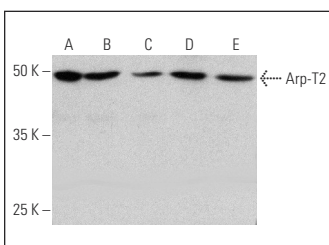
Molecular Weight (observed) of Arp-T2: 37/43 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, EOC 20 whole cell lysate: sc-364187 or F9 cell lysate: sc-2245.

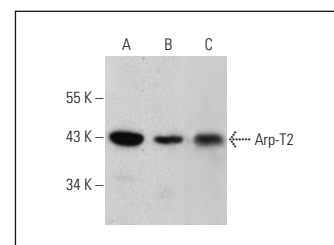
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Arp-T2 (H-2): sc-515601. Western blot analysis of Arp-T2 expression in C2C12 (A), EOC 20 (B) and F9 (C) whole cell lysates and mouse testis (D) and rat testis (E) tissue extracts.



Arp-T2 (H-2): sc-515601. Western blot analysis of Arp-T2 expression in T98G (A), Sol8 (B) and L8 (C) whole cell lysates.

## 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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