

Cylicin-1 (B-8): sc-166400

BACKGROUND

The cytoskeletal calyx structure surrounds part of the nucleus of the mammalian sperm head and contains two main types of basic proteins: calicin and the multiple band proteins (MBPs). Cylicin-1, a member of the MBP family, contains several lysine dipeptides followed by a third variable amino acid, which, in most cases, is aspartic acid. The central portion of the protein is arranged as a series of repeating units that are predicted to form short individual α -helices which are interrupted by short linker segments. The C-terminal tail of Cylicin-1 contains proline-rich segments. Cylicin-1 is expressed only in the calyx of human and cow spermatozoa, and has a possible architectural role during spermiogenesis.

REFERENCES

1. Longo, F.J., et al. 1987. Basic proteins of the peri-nuclear theca of mammalian spermatozoa and spermatids: a novel class of cytoskeletal elements. *J. Cell Biol.* 105: 1105-1120.
2. Hess, H., et al. 1993. Molecular characterization of mammalian cylicin, a basic protein of the sperm head cytoskeleton. *J. Cell Biol.* 122: 1043-1052.
3. Hess, H., et al. 1995. The protein complexity of the cytoskeleton of bovine and human sperm heads: the identification and characterization of cylicin II. *Exp. Cell Res.* 218: 174-182.
4. von Bülow, M., et al. 1995. Molecular nature of cytoskeleton. *Exp. Cell Res.* 219: 407-413.
5. 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.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603121. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CYLC1 (human) mapping to Xq21.1; Cylc1 (mouse) mapping to X E1.

SOURCE

Cylicin-1 (B-8) is a mouse monoclonal antibody raised against amino acids 470-641 mapping near the C-terminus of Cylicin-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cylicin-1 (B-8) is available conjugated to agarose (sc-166400 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166400 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166400 PE), fluorescein (sc-166400 FITC), Alexa Fluor® 488 (sc-166400 AF488), Alexa Fluor® 546 (sc-166400 AF546), Alexa Fluor® 594 (sc-166400 AF594) or Alexa Fluor® 647 (sc-166400 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166400 AF680) or Alexa Fluor® 790 (sc-166400 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Cylicin-1 (B-8) is recommended for detection of Cylicin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 Cylicin-1 siRNA (h): sc-62177, Cylicin-1 siRNA (m): sc-62178, Cylicin-1 shRNA Plasmid (h): sc-62177-SH, Cylicin-1 shRNA Plasmid (m): sc-62178-SH, Cylicin-1 shRNA (h) Lentiviral Particles: sc-62177-V and Cylicin-1 shRNA (m) Lentiviral Particles: sc-62178-V.

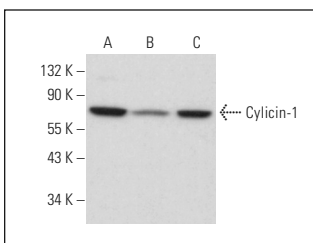
Molecular Weight of Cylicin-1: 74 kDa.

Positive Controls: F9 cell lysate: sc-2245, NTERA-2 cl.D1 whole cell lysate: sc-364181 or PC-3 cell lysate: sc-2220.

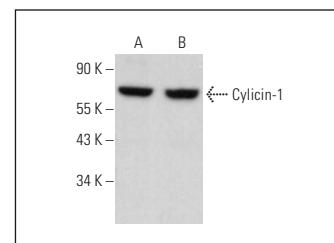
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Cylicin-1 (B-8): sc-166400. Western blot analysis of Cylicin-1 expression in F9 (A), Neuro-2A (B) and NIH/3T3 (C) whole cell lysates.



Cylicin-1 (B-8): sc-166400. Western blot analysis of Cylicin-1 expression in NTERA-2 cl.D1 (A) and PC-3 (B) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.

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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