

Cylicin-1 (M-57): sc-68402

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 bovine spermatozoa, and has a possible architectural role during spermiogenesis.

REFERENCES

1. Longo, F.J., Krohne, G. and Franke, W.W. 1987. Basic proteins of the perinuclear theca of mammalian spermatozoa and spermatids: a novel class of cytoskeletal elements. *J. Cell Biol.* 105: 1105-1120.
3. Hess, H., Heid, H. and Franke, W.W. 1993. Molecular characterization of mammalian cylicin, a basic protein of the sperm head cytoskeleton. *J. Cell Biol.* 122: 1043-1052.
4. Hess, H., Heid, H., Zimbelmann, R. and Franke, W.W. 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.
5. von Bülow, M., Heid, H., Hess, H. and Franke, W.W. 1995. Molecular nature of cytoskeleton. *Exp. Cell Res.* 219: 407-413.
6. Heid, H., Figge, U., Winter, S., Kuhn, C., Zimbelmann, R. and Franke, W. 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.
7. 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/>
8. Rousseaux-Prevost, R., Lecuyer, C., Drobecq, H., Sergheraert, C., Dacheux, J.L. and Rousseaux, J. 2003. Characterization of boar sperm cytoskeletal Cylicin-2 as protein. *Biochem. Biophys. Res. Commun.* 303: 182-189.

CHROMOSOMAL LOCATION

Genetic locus: Cylc1 (mouse) mapping to X E1.

SOURCE

Cylicin-1 (M-57) is a rabbit polyclonal antibody raised against amino acids 230-286 mapping within an internal region of Cylicin-1 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Cylicin-1 (M-57) is recommended for detection of Cylicin-1 of mouse origin by Western Blotting (starting dilution 1:200, 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 (m): sc-62178, Cylicin-1 shRNA Plasmid (m): sc-62178-SH and Cylicin-1 shRNA (m) Lentiviral Particles: sc-62178-V.

Molecular Weight of Cylicin-1: 74 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.