



Cylicin-2 (N-19): sc-65078

BACKGROUND

Cylicin-2 (multiple-band polypeptide II) is a 348 amino acid protein encoded by the human gene CYLC2. Cylicin-1 is a type of a cytoskeletal protein which contains numerous Lys-Lys-Asp tripeptides accumulated in nine central repetitive units predicted to form α -helices. Cylicin-2, present in cow and human sperm heads, has the same prominent molecular characteristics as Cylicin-1, including a high content of charged amino acids, the abundance of Lys-Lys-Asp tripeptides and repetitive units of presumably α -helical configuration. Cylicin-2 is found in the acrosomal region of round spermatids and in the post-acrosomal region of late spermatids and spermatozoa, in agreement with the localization of Cylicin-1. Cylicin-2 is a novel Actin-binding protein, which probably plays a role in the Actin-related events that occur during spermiogenesis and the early events of fertilization.

REFERENCES

- 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.
- Fouquet, J.P. and Kann, M.L. 1995. The cytoskeleton of mammalian spermatozoa. *Biol. Cell.* 81: 89-93.
- 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-2. *Exp. Cell Res.* 218: 174-182.
- Heid, H., Figge, U., Winter, S., Kuhn, C., Zimbelmann, R. and Franke, W.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.
- Rousseaux-Prévoist, R., Lécuyer, C., Drobecq, H., Sergheraert, C., Dacheux, J.L. and Rousseaux, J. 2003. Characterization of boar sperm cytoskeletal Cylicin-2 as an Actin-binding protein. *Biochem. Biophys. Res. Commun.* 303: 182-189.
- Xie, X., Schmits, R., Renner, C., Preuss, D., Kubuschok, B. and Pfreundschuh, M. 2003. Systematic search and molecular characterization of the antigenic targets of myeloma immunoglobulins: a monoclonal IgA from a female patient targeting sperm-specific Cylicin-2. *Cancer Immun.* 1: 11.
- Preuss, K.D., Held, G., Kubuschok, B., Hung, C.Z., Malatsidze, N., Wagner, M. and Pfreundschuh, M. 2007. Identification of antigenic targets of paraproteins by expression cloning does not support a causal role of chronic antigenic stimulation in the pathogenesis of multiple myeloma and MGUS. *Int. J. Cancer* 121: 459-461.

CHROMOSOMAL LOCATION

Genetic locus: CYLC2 (human) mapping to 9q31.1.

SOURCE

Cylicin-2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cylicin-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-65078 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cylicin-2 (N-19) is recommended for detection of Cylicin-2 of human 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).

Suitable for use as control antibody for Cylicin-2 siRNA (h): sc-62179.

Molecular Weight of Cylicin-2: 39 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.

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.

PROTOCOLS

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