SANTA CRUZ BIOTECHNOLOGY, INC.

Odf3l2 (H-4): sc-398309

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The major cytoskeletal structures in the mammalian sperm tail are the outer dense fibers (Odfs) and the fibrous sheath. The Odfs are located on the outside of the axoneme and help maintain the passive elastic structures and elastic recoil of the sperm tail. Human Odfs consist of approximately 10 major and at least 15 minor proteins. The major proteins, including Odf1, Odf2 and Odf3, compose a family of proteins that are preferentially expressed during mammalian spermiogenesis. Odf3 is expressed during the latter part of spermatogenesis in flagella of elongated spermatids and mature sperm. A member of the Odf3 family, Odf3l2 (outer dense fiber protein 3-like protein 2), also known as C19orf19, is a 289 amino acid protein containing three DUF1309 repeats. The gene encoding Odf3l2 maps to human chromosome 19p13.3 and mouse chromosome 10 C1. Two isoforms of Odf3l2 are produced by alternative splicing events.

REFERENCES

1. Gastmann, O., et al. 1993. Sequence, expression, and chromosomal assignment of a human sperm outer dense fiber gene. Mol. Reprod. Dev. 36: 407-418.
2. Shao, X. and van der Hoorn, F.A. 1996. Self-interaction of the major 27-kilodalton outer dense fiber protein is in part mediated by a leucine zipper domain in the rat. Biol. Reprod. 55: 1343-1350.
3. Shao, X., et al. 1998. Human outer dense fiber gene, Odf2, localizes to chromosome 9q34. Cytogenet. Cell Genet. 83: 221-223.
4. Schalles, U., et al. 1998. Developmental expression of the 84-kDa ODF sperm protein: localization to both the cortex and medulla of outer dense fibers and to the connecting piece. Dev. Biol. 199: 250-260.

CHROMOSOMAL LOCATION

Genetic locus: ODF3L2 (human) mapping to 19p13.3; Odf3l2 (mouse) mapping to 10 C1.

SOURCE

Odf3l2 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-34 at the N-terminus of Odf3l2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Odf3l2 (H-4) is available conjugated to agarose (sc-398309 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398309 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398309 PE), fluorescein (sc-398309 FITC), Alexa Fluor® 488 (sc-398309 AF488), Alexa Fluor® 546 (sc-398309 AF546), Alexa Fluor® 594 (sc-398309 AF594) or Alexa Fluor® 647 (sc-398309 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398309 AF680) or Alexa Fluor® 790 (sc-398309 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398309 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Odf3l2 (H-4) is recommended for detection of Odf3l2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 Odf3l2 siRNA (h): sc-97399, Odf3l2 siRNA (m): sc-145475, Odf3l2 shRNA Plasmid (h): sc-97399-SH, Odf3l2 shRNA Plasmid (m): sc-145475-SH, Odf3l2 shRNA (h) Lentiviral Particles: sc-97399-V and Odf3l2 shRNA (m) Lentiviral Particles: sc-145475-V.

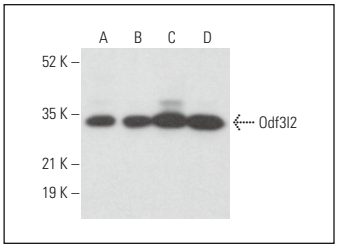
Molecular Weight of Odf3l2 isoforms 1/2: 31/27 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or KNRK whole cell lysate: sc-2214.

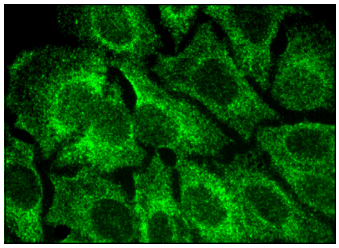
RECOMMENDED SUPPORT REAGENTS

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



Odf3l2 (H-4): sc-398309. Western blot analysis of Odf3l2 expression in NIH/3T3 (**A**), RAW 264.7 (**B**), F9 (**C**) and KNRK (**D**) whole cell lysates.



Odf3l2 (H-4): sc-398309. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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 for detailed protocols and support products.