

Odf3l2 (K-18): sc-248137

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 3 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

- Gastmann, O., Burfeind, P., Günther, E., Hameister, H., Szpirer, C. and Hoyer-Fender, S. 1993. Sequence, expression, and chromosomal assignment of a human sperm outer dense fiber gene. *Mol. Reprod. Dev.* 36: 407-418.
- 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.
- Shao, X., Murthy, S., Demetrick, D.J. and van der Hoorn, F.A. 1998. Human outer dense fiber gene, ODF2, localizes to chromosome 9q34. *Cytogenet. Cell Genet.* 83: 221-223.
- Schalles, U., Shao, X., van der Hoorn, F.A. and Oko, R. 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.
- Petersen, C., Füzesi, L. and Hoyer-Fender, S. 1999. Outer dense fibre proteins from human sperm tail: molecular cloning and expression analyses of two cDNA transcripts encoding proteins of approximately 70 kDa. *Mol. Hum. Reprod.* 5: 627-635.
- Shao, X., Xue, J. and van der Hoorn, F.A. 2001. Testicular protein Spag5 has similarity to mitotic spindle protein Deepest and binds outer dense fiber protein Odf1. *Mol. Reprod. Dev.* 59: 410-416.
- Kierszenbaum, A.L. 2002. Keratins: unraveling the coordinated construction of scaffolds in spermatogenic cells. *Mol. Reprod. Dev.* 61: 1-2.
- Petersen, C., Aumüller, G., Bahrami, M. and Hoyer-Fender, S. 2002. Molecular cloning of Odf3 encoding a novel coiled-coil protein of sperm tail outer dense fibers. *Mol. Reprod. Dev.* 61: 102-112.
- Ghafari-Fard, S., Abbasi, A., Moslehi, H., Faramarzi, N., Taba Taba Vakili, S., Mobasheri, M.B. and Modarressi, M.H. 2010. Elevated expression levels of testis-specific genes TEX101 and SPATA19 in basal cell carcinoma and their correlation with clinical and pathological features. *Br. J. Dermatol.* 162: 772-779.

RESEARCH USE

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

CHROMOSOMAL LOCATION

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

SOURCE

Odf3l2 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Odf3l2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-248137 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Odf3l2 (K-18) is recommended for detection of Odf3l2 of mouse, rat and 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); non cross-reactive with Odf3l1.

Odf3l2 (K-18) is also recommended for detection of Odf3l2 in additional species, including canine and bovine.

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.

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.

PROTOCOLS

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