

Odf3 (G-12): sc-131202

BACKGROUND

Constituting the main cytoskeletal structure of spermatid flagella, outer dense fibers (ODFs) add elastic recoil, stiffness and protection against shear forces during sperm movement. Human ODFs consist of approximately 10 major and at least 15 minor proteins. The major proteins of the ODF include Odf1, Odf2, and Odf3, which compose a family of proteins that are preferentially expressed during mammalian spermiogenesis. Odf3 (outer dense fiber protein 3), also known as sperm tail protein SHIPPO 1 and TISP50 (transcript induced in spermiogenesis protein 50), is a 254 amino acid protein that is expressed during the latter part of spermatogenesis in flagella of elongated spermatids and mature sperm. Odf proteins are directed to their exact subcellular location by Spags, which are characterized as chaperone-like Odf-binding molecules. There are two isoforms of Odf3 that are produced as a result of alternative splicing events.

REFERENCES

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4. 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.
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6. 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.

CHROMOSOMAL LOCATION

Genetic locus: ODF3 (human) mapping to 11p15.5; Odf3 (mouse) mapping to 7 F5.

SOURCE

Odf3 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Odf3 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-131202 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Odf3 (G-12) is recommended for detection of Odf3 isoform 1 only of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with Odf3-2.

Suitable for use as control antibody for Odf3 siRNA (h): sc-97010, Odf3 siRNA (m): sc-150178, Odf3 shRNA Plasmid (h): sc-97010-SH, Odf3 shRNA Plasmid (m): sc-150178-SH, Odf3 shRNA (h) Lentiviral Particles: sc-97010-V and Odf3 shRNA (m) Lentiviral Particles: sc-150178-V.

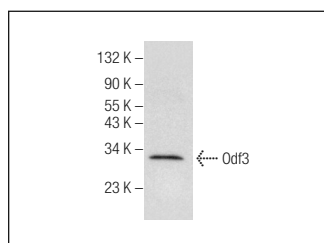
Molecular Weight of Odf3: 28 kDa.

Positive Controls: Human testis tissue extract.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Odf3 (G-12): sc-131202. Western blot analysis of Odf3 expression in human testis tissue extract.

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.