

RSHL3 (T-14): sc-169228

BACKGROUND

Radial spokes are regularly spaced along cilia, sperm, and flagella axonemes and have a multisubunit "stalk" and "head" that form a signal transduction scaffold between the central microtubule pair and dynein arms. RSHL3 is predicted to be a component of the radial spoke head based on homology with proteins in the biflagellate alga *Chlamydomonas reinhardtii* and other ciliates. RSHL3 (radial spoke head-like protein 3), also known as radial spoke head protein 4 homolog A, is a 716 amino acid protein that belongs to the flagellar radial spoke RSP4/6 family. Mutations in the RSHL3 gene cause primary ciliary dyskinesia 1, a disease arising from dysmotility of motile cilia and sperm. Existing as three alternatively spliced isoforms, the RSHL3 gene contains 6 exons, is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly and *P. falciparum*, and maps to human chromosome 6q22.1.

REFERENCES

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- Barbato, A., et al. 2009. Primary ciliary dyskinesia: a consensus statement on diagnostic and treatment approaches in children. *Eur. Respir. J.* 34: 1264-1276.
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- Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612647. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Geremek, M., et al. 2011. Gene expression studies in cells from primary ciliary dyskinesia patients identify 208 potential ciliary genes. *Hum. Genet.* 129: 283-293.

CHROMOSOMAL LOCATION

Genetic locus: RSPH4A (human) mapping to 6q22.1; RspH4a (mouse) mapping to 10 B1.

SOURCE

RSHL3 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RSHL3 of human origin.

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.

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-169228 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RSHL3 (T-14) is recommended for detection of RSHL3 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 other RSHL family members.

RSHL3 (T-14) is also recommended for detection of RSHL3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RSHL3 siRNA (h): sc-95298, RSHL3 siRNA (m): sc-153142, RSHL3 shRNA Plasmid (h): sc-95298-SH, RSHL3 shRNA Plasmid (m): sc-153142-SH, RSHL3 shRNA (h) Lentiviral Particles: sc-95298-V and RSHL3 shRNA (m) Lentiviral Particles: sc-153142-V.

Molecular Weight of RSHL3 isoform 1: 81 kDa.

Molecular Weight of RSHL3 isoform 2: 53 kDa.

Molecular Weight of RSHL3 isoform 3: 67 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.

RESEARCH USE

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