

# DNALI1 (A-9): sc-514832

## BACKGROUND

Dyneins are multisubunit, high molecular weight ATPases that interact with microtubules to generate force by converting the chemical energy of ATP into the mechanical energy of movement. Cytoplasmic or axonemal dynein heavy, intermediate, light and light-intermediate chains are all components of minus end-directed motors; complexes that transport cellular cargo toward the central region of the cell. Axonemal dynein motors contain one to three non-identical heavy chains and cause a sliding of microtubules in the axonemes of cilia and flagella in a mechanism necessary for cilia to beat and propel the cell. DNALI1 (dynein, axonemal, light intermediate chain 1), also known as P28, is a 258 amino acid protein involved in flagellar motility. A member of the inner dynein arm light chain family, DNALI1 is widely expressed with highest expression found in testis, and is considered a potential candidate for immotile cilia syndrome (ICS).

## REFERENCES

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2. Kastury, K., et al. 1997. Complementary deoxyribonucleic acid cloning and characterization of a putative human axonemal dynein light chain gene. *J. Clin. Endocrinol. Metab.* 82: 3047-3053.
3. Yagi, T. 2000. ADP-dependent microtubule translocation by flagellar inner-arm dyneins. *Cell Struct. Funct.* 25: 263-267.
4. Epstein, E., et al. 2000. Dynein light chain binding to a 3'-untranslated sequence mediates parathyroid hormone mRNA association with microtubules. *J. Clin. Invest.* 105: 505-512.
5. Tang, Q., et al. 2002. A novel transforming growth factor- $\beta$  receptor-interacting protein that is also a light chain of the motor protein dynein. *Mol. Biol. Cell* 13: 4484-4496.
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7. Combs, J., et al. 2006. Recruitment of dynein to the Jurkat immunological synapse. *Proc. Natl. Acad. Sci. USA* 103: 14883-14888.
8. Online Mendelian Inheritance in Man, OMIM<sup>TM</sup>. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 602135. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: DNALI1 (human) mapping to 1p34.3; Dnali1 (mouse) mapping to 4 D2.2.

## SOURCE

DNALI1 (A-9) is a mouse monoclonal antibody raised against amino acids 23-156 mapping within an internal region of DNALI1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

DNALI1 (A-9) is recommended for detection of DNALI1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 DNALI1 siRNA (h): sc-88537, DNALI1 siRNA (m): sc-143116, DNALI1 shRNA Plasmid (h): sc-88537-SH, DNALI1 shRNA Plasmid (m): sc-143116-SH, DNALI1 shRNA (h) Lentiviral Particles: sc-88537-V and DNALI1 shRNA (m) Lentiviral Particles: sc-143116-V.

Molecular Weight (predicted) of DNALI1: 30 kDa.

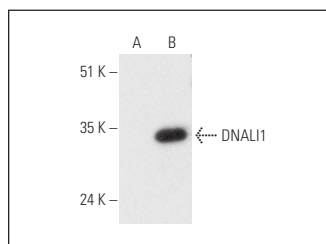
Molecular Weight (observed) of DNALI1: 32 kDa.

Positive Controls: DNALI1 (h2): 293T Lysate: sc-116188.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



DNALI1 (A-9): sc-514832. Western blot analysis of DNALI1 expression in non-transfected: sc-117752 (A) and human DNALI1 transfected: sc-116188 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.