

DNCLI1 (m): 293T Lysate: sc-119812

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. There are two families of Dynein motor complexes: axonemal Dynein heavy, intermediate, light and light-intermediate chains are all components of minus end-directed motors, while cytoplasmic Dyneins mainly function in intracellular transport. Belonging to the Dynein light intermediate chain family, DNCLI1 (Cytoplasmic dynein 1 light intermediate chain 1) is a 523 amino acid protein that consists of at least 3 heavy chains, 2 intermediate chains and 8 light chains. DNCLI1 may play a role in binding Dynein heavy chain to chromosomes or membranous organelles and also may regulate Dynein enzymatic activity by associating with heavy chains of the Dynein head.

REFERENCES

1. Purohit, A., et al. 1999. Direct interaction of pericentrin with cytoplasmic dynein light intermediate chain contributes to mitotic spindle organization. *J. Cell Biol.* 147: 481-492.
2. Tynan, S.H., et al. 2000. Light intermediate chain 1 defines a functional subfraction of cytoplasmic dynein which binds to pericentrin. *J. Biol. Chem.* 275: 32763-32768.
3. Bielli, A., et al. 2001. The small GTPase Rab4A interacts with the central region of cytoplasmic dynein light intermediate chain-1. *Biochem. Biophys. Res. Commun.* 281: 1141-1153.
4. Ligon, L.A., et al. 2004. A direct interaction between cytoplasmic dynein and kinesin I may coordinate motor activity. *J. Biol. Chem.* 279: 19201-19208.
5. Song, Y., et al. 2007. Potential role for phosphorylation in differential regulation of the assembly of dynein light chains. *J. Biol. Chem.* 282: 17272-17279.
6. Lo, K.W., et al. 2007. Interaction of the DYNLT (TCTEX1/RP3) light chains and the intermediate chains reveals novel intersubunit regulation during assembly of the dynein complex. *J. Biol. Chem.* 282: 36871-36878.
7. Wickstead, B. and Gull, K. 2007. Dyneins across eukaryotes: a comparative genomic analysis. *Traffic* 8: 1708-1721.
8. Mische, S., et al. 2008. Dynein light intermediate chain: an essential subunit that contributes to spindle checkpoint inactivation. *Mol. Biol. Cell* 19: 4918-4929.

CHROMOSOMAL LOCATION

Genetic locus: Dync1li1 (mouse) mapping to 9 F3.

PRODUCT

DNCLI1 (m): 293T Lysate represents a lysate of mouse DNCLI1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DNCLI1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DNCLI1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.