

DYNC2L1 (H-4): sc-376644

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 Dynein is an approximately 12 subunit complex of 2 heavy chains, 2 intermediate chains to anchor Dynein to its cargo, four smaller intermediate chains and several light chains. Cytoplasmic Dynein performs functions necessary for cell survival such as organelle transport and centrosome assembly. DYNC2L1 (Dynein, cytoplasmic 2, light intermediate chain 1), also known as LIC3, D2LIC or CGI-60, is a 351 amino acid cytoplasmic protein belonging to the Dynein light intermediate chain family. DYNC2L1 may function as a motor for intraflagellar retrograde transport and in cilia biogenesis. The cytoplasmic Dynein complex 2 may be composed of a DYNC2H1 homodimer and a number of DYNC2L1 light intermediate chains. DYNC2L1 exists as five alternatively spliced isoforms.

REFERENCES

1. Grissom, P.M., et al. 2002. Identification of a novel light intermediate chain (D2LIC) for mammalian cytoplasmic dynein 2. *Mol. Biol. Cell* 13: 817-829.
2. Malikov, V., et al. 2004. Cytoplasmic Dynein nucleates microtubules to organize them into radial arrays *in vivo*. *Mol. Biol. Cell* 15: 2742-2749.
3. Mallik, R., et al. 2004. Cytoplasmic Dynein functions as a gear in response to load. *Nature* 427: 649-652.

CHROMOSOMAL LOCATION

Genetic locus: DYNC2L1 (human) mapping to 2p21; Dync2l1 (mouse) mapping to 17 E4.

SOURCE

DYNC2L1 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 65-97 within a cytoplasmic domain of DYNC2L1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DYNC2L1 (H-4) is available conjugated to agarose (sc-376644 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376644 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376644 PE), fluorescein (sc-376644 FITC), Alexa Fluor® 488 (sc-376644 AF488), Alexa Fluor® 546 (sc-376644 AF546), Alexa Fluor® 594 (sc-376644 AF594) or Alexa Fluor® 647 (sc-376644 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376644 AF680) or Alexa Fluor® 790 (sc-376644 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

DYNC2L1 (H-4) is recommended for detection of DYNC2L1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DYNC2L1 siRNA (h): sc-94258, DYNC2L1 siRNA (m): sc-143207, DYNC2L1 shRNA Plasmid (h): sc-94258-SH, DYNC2L1 shRNA Plasmid (m): sc-143207-SH, DYNC2L1 shRNA (h) Lentiviral Particles: sc-94258-V and DYNC2L1 shRNA (m) Lentiviral Particles: sc-143207-V.

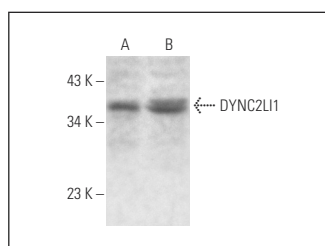
Molecular Weight of DYNC2L1: 40 kDa.

Positive Controls: DYNC2L1 (m): 293T Lysate: sc-119873, T98G cell lysate: sc-2294 or SK-N-MC cell lysate: sc-2237.

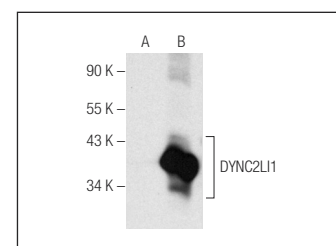
RECOMMENDED SUPPORT REAGENTS

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

DATA



DYNC2L1 (H-4): sc-376644. Western blot analysis of DYNC2L1 expression in SK-N-MC (A) and T98G (B) whole cell lysates.



DYNC2L1 (H-4): sc-376644. Western blot analysis of DYNC2L1 expression in non-transfected: sc-117752 (A) and mouse DYNC2L1 transfected: sc-119873 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gholkar, A.A., et al. 2015. Tctex1d2 associates with short-rib polydactyly syndrome proteins and is required for ciliogenesis. *Cell Cycle* 14: 1116-1125.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA