SANTA CRUZ BIOTECHNOLOGY, INC.

Dynein IC2, axonemal (T-17): sc-32218

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dyneins are multi-subunit, 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; the complex that transports cellular cargos towards 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. Cytoplasmic Dynein is an approximately 12 subunit complex of two heavy chains, two intermediate chains to anchor Dynein to its cargo, four smaller intermediate chains and several light chains. It performs functions necessary for cell survival such as organelle transport and centrosome assembly. The carboxy-terminus of Dynein is important for microtubule-dependent motility and is highly conserved, while the amino-terminal regions are more variable. Several proteins regulate Dynein activity, including Dynactin, LIS1 and nudel (nudE-like).

REFERENCES

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4. Li, J., et al. 2005. NudEL targets dynein to microtubule ends through LIS1. Nat. Cell Biol. 7: 686-690.
5. Seetharam, R.N., et al. 2005. High speed sliding of axonemal microtubules produced by outer arm dynein. Cell Motil. Cytoskeleton 60: 96-103.
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8. Pfister, K.K., et al. 2005. Cytoplasmic dynein nomenclature. J. Cell Biol. 171: 411-413.
9. McGrath, J.L. 2005. Dynein motility: four heads are better than two. Curr. Biol. 15: R970-972.

CHROMOSOMAL LOCATION

Genetic locus: DNAI2 (human) mapping to 17q25.1; Dnai2 (mouse) mapping to 11 E2.

SOURCE

Dynein IC2, axonemal (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Dynein IC2, axonemal 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-32216 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Dynein IC2, axonemal (T-17) is recommended for detection of Dynein IC2, axonemal 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).

Dynein IC2, axonemal (T-17) is also recommended for detection of Dynein IC2, axonemal in additional species, including canine and bovine.

Suitable for use as control antibody for Dynein IC2, axonemal siRNA (h): sc-44697, Dynein IC2, axonemal siRNA (m): sc-155887, Dynein IC2, axonemal shRNA Plasmid (h): sc-44697-SH, Dynein IC2, axonemal shRNA Plasmid (m): sc-155887-SH, Dynein IC2, axonemal shRNA (h) Lentiviral Particles: sc-44697-V and Dynein IC2, axonemal shRNA (m) Lentiviral Particles: sc-155887-V.

Molecular Weight of Dynein IC2, axonemal: 66 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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.

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.