SANTA CRUZ BIOTECHNOLOGY, INC.

Dynactin p150 (12): sc-135890

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dynactin, a multisubunit complex, is a cytoplasmic Dynein-interacting protein that functions as the "receptor" for the Dynein microtubule motor. Dynactin-dynein binding may be required for most, if not all, cytoplasmic Dynein driven activities and is thought to contribute to Dynein's functional diversity. Dynactin, enriched in neurons, also binds to microtubules and has been shown to function in diverse processes, including organelle transport, formation of the mitotic spindle and cytokinesis. Dynactin subunits include p22, p50, p62, p150, (also designated Glued), and Arp1.

REFERENCES

1. Waterman-Storer, C.M., et al. 1997. The interaction between cytoplasmic Dynein and Dynactin is required for fast axonal transport. Proc. Natl. Acad. Sci. USA 94: 12180-12185.
2. Holleran, E.A., et al. 1998. The role of the Dynactin complex in intracellular motility. Int. Rev. Cytol. 182: 69-109.
3. Karki, S., et al. 1998. Characterization of the p22 subunit of Dynactin reveals the localization of cytoplasmic Dynein and Dynactin to the midbody of dividing cells. J. Cell Biol. 142: 1023-1034.
4. Berrueta, L., et al. 1999. The APC-associated protein EB1 associates with components of the Dynactin complex and cytoplasmic Dynein intermediate chain. Curr. Biol. 9: 425-428.

CHROMOSOMAL LOCATION

Genetic locus: DCTN1 (human) mapping to 2p13.1; Dctn1 (mouse) mapping to 6 C3.

SOURCE

Dynactin p150 (12) is a mouse monoclonal antibody raised against amino acids 3-202 of Dynactin p150 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dynactin p150 (12) is recommended for detection of the p150 isoform of Dynactin 1 of mouse, rat, human and canine 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Dynactin 1 siRNA (h): sc-43317, Dynactin 1 siRNA (m): sc-43318, Dynactin 1 shRNA Plasmid (h): sc-43317-SH, Dynactin 1 shRNA Plasmid (m): sc-43318-SH, Dynactin 1 shRNA (h) Lentiviral Particles: sc-43317-V and Dynactin 1 shRNA (m) Lentiviral Particles: sc-43318-V.

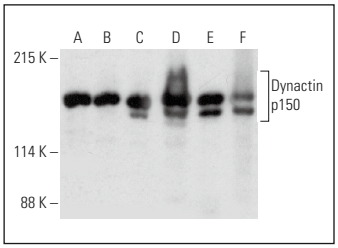
Molecular Weight of Dynactin p150: 150 kDa.

Positive Controls: Dynactin 1 (h2): 293 Lysate: sc-177152, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

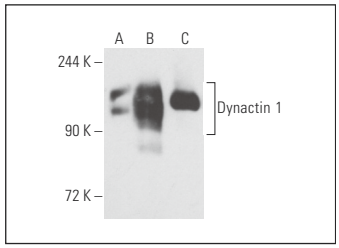
RECOMMENDED SUPPORT PRODUCTS

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



Dynactin p150 (12): sc-135890. Western blot analysis of Dynactin p150 expression in Hep G2 (**A**), A-431 (**B**), HeLa (**C**) and Neuro-2A (**D**) whole cell lysates and human testis (**E**) and mouse brain (**F**) tissue extracts.



Dynactin p150 (12): sc-135890. Western blot analysis of Dynactin 1 expression in non-transfected 293: sc-110760 (**A**), human Dynactin 1 transfected 293: sc-177152 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Neubauer, H.A., et al. 2019. Cytoplasmic Dynein regulates the subcellular localization of sphingosine kinase 2 to elicit tumor-suppressive functions in glioblastoma. Oncogene 38: 1151-1165.
2. Saito, K., et al. 2020. Conformational diversity of Dynactin sidearm and domain organization of its subunit p150. Mol. Biol. Cell 31: 1218-1231.
3. Halbi, G., et al. 2021. Nano-particles carried by multiple Dynein motors self-regulate their number of actively participating motors. Int. J. Mol. Sci. 22: 8893.
4. Liang, C., et al. 2022. Carboxypeptidase E independently changes microtubule glutamylation, dendritic branching, and neuronal migration. ASN Neuro 14: 17590914211062765.
5. Zhang, Y., et al. 2022. Dync1li1 is required for the survival of mammalian cochlear hair cells by regulating the transportation of autophagosomes. PLoS Genet. 18: e1010232.
6. D'Souza, A.I., et al. 2023. Vesicles driven by dynein and kinesin exhibit directional reversals without regulators. Nat .Commun. 14: 7532.

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. Not for resale.