

# Dynactin 1 (A-2): sc-365274

## 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 the functional diversity of Dynein. Enriched in neurons, Dynactin 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 ARP-1. The p135 splice variant is neuron specific and, unlike p150, does not bind microtubules.

## CHROMOSOMAL LOCATION

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

## SOURCE

Dynactin 1 (A-2) is a mouse monoclonal antibody raised against amino acids 964-1263 of Dynactin 1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dynactin 1 (A-2) is available conjugated to agarose (sc-365274 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365274 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365274 PE), fluorescein (sc-365274 FITC), Alexa Fluor® 488 (sc-365274 AF488), Alexa Fluor® 546 (sc-365274 AF546), Alexa Fluor® 594 (sc-365274 AF594) or Alexa Fluor® 647 (sc-365274 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365274 AF680) or Alexa Fluor® 790 (sc-365274 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

## APPLICATIONS

Dynactin 1 (A-2) is recommended for detection of p150 and p135 splice variants of Dynactin 1 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

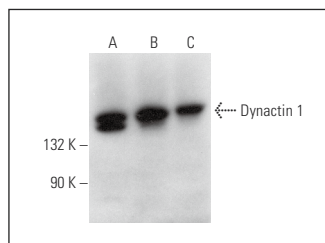
Molecular Weight of Dynactin 1 isoforms: 135/150 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, BC<sub>3</sub>H1 cell lysate: sc-2299 or Ramos cell lysate: sc-2216.

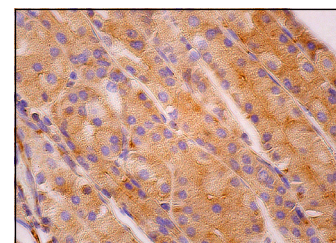
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Dynactin 1 (A-2): sc-365274. Western blot analysis of Dynactin 1 expression in Ramos (A), HeLa (B) and BC<sub>3</sub>H1 (C) whole cell lysates.



Dynactin 1 (A-2): sc-365274. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Lee, C.M., et al. 2019. JLP-centrosome is essential for the microtubule-mediated nucleocytoplasmic transport induced by extracellular stimuli. *Sci. Adv.* 5: eaav0318.
- Jiang, J., et al. 2020. Regorafenib induces lethal autophagy arrest by stabilizing PSAT1 in glioblastoma. *Autophagy* 16: 106-122.
- Shi, J., et al. 2022. Repurposing oxiconazole against colorectal cancer via PRDX2-mediated autophagy arrest. *Int. J. Biol. Sci.* 18: 3747-3761.
- Ueda, T., et al. 2024. Dysregulation of stress granule dynamics by DCTN1 deficiency exacerbates TDP-43 pathology in *Drosophila* models of ALS/FTD. *Acta Neuropathol. Commun.* 12: 20.

## 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.