

# Dynactin 1 (H-300): sc-11363

## 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.

## REFERENCES

1. Dillman, J.F., et al. 1996. Functional analysis of dynactin and cytoplasmic dynein in slow axonal transport. *J. Neurosci.* 16: 6742-6752.
2. Tokito, M.K., et al. 1997. Functionally distinct isoforms of dynactin are expressed in human neurons. *Mol. Biol. Cell* 7: 1167-1180.
3. 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.
4. Holleran, E.A., et al. 1998. The role of the dynactin complex in intracellular motility. *Int. Rev. Cytol.* 182: 69-109.
5. 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.
6. 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.
7. Karki, S., et al. 1999. Cytoplasmic dynein and dynactin in cell division and intracellular transport. *Curr. Opin. Cell Biol.* 11: 45-53.

## CHROMOSOMAL LOCATION

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

## SOURCE

Dynactin 1 (H-300) is a rabbit polyclonal antibody raised against amino acids 964-1263 of Dynactin 1 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.

## 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.

## APPLICATIONS

Dynactin 1 (H-300) is recommended for detection of p150 and p135 splice variants of Dynactin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

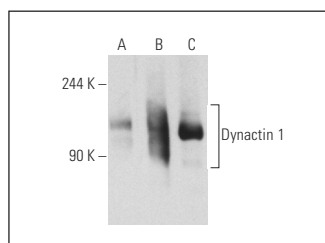
Dynactin 1 (H-300) is also recommended for detection of p150 and p135 splice variants of Dynactin 1 in additional species, including equine, canine, bovine and porcine.

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.

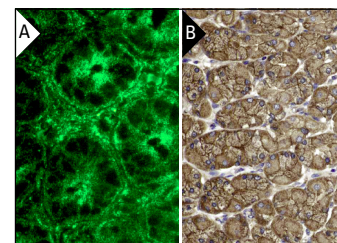
Molecular Weight of Dynactin isoforms: 135/150 kDa.

Positive Controls: Dynactin 1 (h2): 293T Lysate: sc-177152, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

## DATA



Dynactin 1 (H-300): sc-11363. 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.



Dynactin (H-300): sc-11363. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

1. Liu, J.J., et al. 2003. BPAG1n4 is essential for retrograde axonal transport in sensory neurons. *J. Cell Biol.* 163: 223-229.
2. El-Kadi, A.M., et al. 2010. The legs at odd angles (Loa) mutation in cytoplasmic dynein ameliorates mitochondrial function in SOD1G93A mouse model for motor neuron disease. *J. Biol. Chem.* 285: 18627-18639.


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Try **Dynactin 1 (A-2): sc-365274** or **Dynactin 1 (E-6): sc-271166**, our highly recommended monoclonal alternatives to Dynactin 1 (H-300).