SANTA CRUZ BIOTECHNOLOGY, INC.

Dynactin p62 (N-17): sc-12239

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dynactin is a multisubunit complex and a required cofactor for most, or all, of the cellular processes powered by the microtubule-based motor cytoplasmic dynein. Dynactin contains a short actin-related protein 1 (Arp1) filament with capZ at the barbed end and p62 at the pointed end. The p62 subunit is an integral component of 20 S dynactin with a highly conserved cysteine-rich motif that interacts directly with Arp1. Dynactin p62 has a punctate cyto-plasmic distribution as well as centrosomal distribution typical of dynactin. In addition, Dynactin p62 is distributed in the nucleus at very high expression levels. Due to the structural composition of dynactin, the p62 subunit is implicated in Arp1 pointed-end binding and in linking dynein and dynactin to the cortical cytoskeleton.

REFERENCES

1. Schafer, D.A., Gill, S.R., Cooper, J.A., Heuser, J.E. and Schroer, T.A. 1994. Ultrastructural analysis of the dynactin complex: an actin-related protein is a component of a filament that resembles F-actin. J. Cell Biol. 126: 403-412.
2. Garces, J.A., Clark, I.B., Meyer, D.I. and Vallee, R.B. 1999. Interaction of the p62 subunit of dynactin with Arp1 and the cortical actin cytoskeleton. Curr. Biol. 9: 1497-1500.
3. Eckley, D.M., Gill, S.R., Melkonian, K.A., Bingham, J.B., Goodson, H.V., Heuser, J.E. and Schroer, T.A. 1999. Analysis of dynactin subcomplexes reveals a novel actin-related protein associated with the Arp1 minifilament pointed end. J. Cell Biol. 147: 307-320.

CHROMOSOMAL LOCATION

Genetic locus: DCTN4 (human) mapping to 5q33.1; Dctn4 (mouse) mapping to 18 D3.

SOURCE

Dynactin p62 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Dynactin p62 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.

Dynactin p62 (N-17) is available conjugated phycoerythrin (sc-12239 PE, 200 µg/ml), for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-12239 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 p62 (N-17) is recommended for detection of Dynactin p62 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

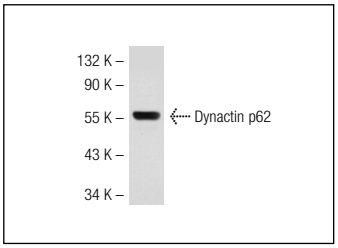
Dynactin p62 (N-17) is also recommended for detection of Dynactin p62 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Dynactin p62 siRNA (h): sc-35232, Dynactin p62 siRNA (m): sc-35233, Dynactin p62 shRNA Plasmid (h): sc-35232-SH, Dynactin p62 shRNA Plasmid (m): sc-35233-SH, Dynactin p62 shRNA (h) Lentiviral Particles: sc-35232-V and Dynactin p62 shRNA (m) Lentiviral Particles: sc-35233-V.

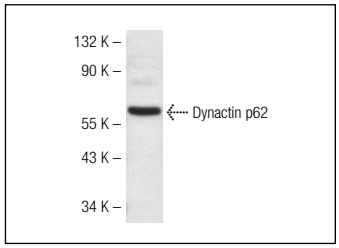
Molecular Weight of Dynactin p62: 62 kDa.

Positive Controls: mouse brain extract: sc-2253, BC_3H1 cell lysate: sc-2299 or NIH/3T3 nuclear extract: sc-2138.

DATA



Dynactin p62 (N-17): sc-12239. Western blot analysis of Dynactin p62 expression in BC_3H1 whole cell lysate.



Dynactin p62 (N-17): sc-12239. Western blot analysis of Dynactin p62 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Payne, C., Rawe, V., Ramalho-Santos, J., Simerly, C. and Schatten, G. 2003. Preferentially localized dynein and perinuclear dynactin associate with nuclear pore complex proteins to mediate genomic union during mammalian fertilization. J. Cell Sci. 116: 4727-4738.
2. Lim, C.M., Cater, M.A., Mercer, J.F. and La Fontaine, S. 2006. Copper-dependent interaction of Dynactin subunit p62 with the N terminus of ATP7B but not ATP7A. J. Biol. Chem. 281: 14006-14014.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.