

Dynactin 5 (D-9): sc-518204

BACKGROUND

Dynactin is a multisubunit complex that functions as a binding partner 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. Dynactin 5, also known as Dynactin p25, is an evolutionarily conserved component of the Arp1 filament pointed-end-binding subcomplex of the Dynactin shoulder complex. This pointed-end-binding subcomplex also consists of Dynactin 6, Dynactin p62 and ACTR10. Dynactin 5, along with Dynactin p62 and Dynactin 6, is believed to function in the regulation of Dynactin-membranous cargo interactions. Further supporting its role in cargo binding, Dynactin 5 is essential for retrograde vesicle trafficking. Dynactin 5 contains an isoleucine-patch motif and exhibits a left-handed parallel β -helix fold.

REFERENCES

1. Eckley, D.M., et al. 1999. Analysis of Dynactin subcomplexes reveals a novel Actin-related protein associated with the arp1 minifilament pointed end. *J. Cell Biol.* 147: 307-320.
2. Lee, I.H., et al. 2001. Null mutants of the neurospora Actin-related protein 1 pointed-end complex show distinct phenotypes. *Mol. Biol. Cell* 12: 2195-2206.
3. Parisi, G., et al. 2004. Dynactins p25 and p27 are predicted to adopt the L β H fold. *FEBS Lett.* 562: 1-4.
4. Hodgkinson, J.L., et al. 2005. Three-dimensional reconstruction of the Dynactin complex by single-particle image analysis. *Proc. Natl. Acad. Sci. USA* 102: 3667-3672.
5. Levy, J.R. and Holzbaur, E.L. 2006. Cytoplasmic Dynein/Dynactin function and dysfunction in motor neurons. *Int. J. Dev. Neurosci.* 24: 103-111.

CHROMOSOMAL LOCATION

Genetic locus: DCTN5 (human) mapping to 16p12.2; Dctn5 (mouse) mapping to 7 F3.

SOURCE

Dynactin 5 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 60-85 of Dynactin 5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dynactin 5 (D-9) is available conjugated to agarose (sc-518204 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518204 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518204 PE), fluorescein (sc-518204 FITC), Alexa Fluor[®] 488 (sc-518204 AF488), Alexa Fluor[®] 546 (sc-518204 AF546), Alexa Fluor[®] 594 (sc-518204 AF594) or Alexa Fluor[®] 647 (sc-518204 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518204 AF680) or Alexa Fluor[®] 790 (sc-518204 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Dynactin 5 (D-9) is recommended for detection of Dynactin 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for Dynactin 5 siRNA (h): sc-93011, Dynactin 5 siRNA (m): sc-143204, Dynactin 5 shRNA Plasmid (h): sc-93011-SH, Dynactin 5 shRNA Plasmid (m): sc-143204-SH, Dynactin 5 shRNA (h) Lentiviral Particles: sc-93011-V and Dynactin 5 shRNA (m) Lentiviral Particles: sc-143204-V.

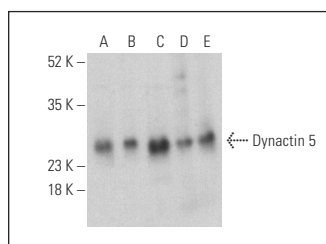
Molecular Weight of Dynactin 5: 25 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

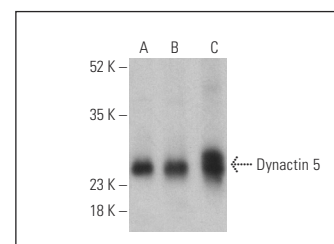
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 5 (D-9): sc-518204. Western blot analysis of Dynactin 5 expression in K-562 (A), Hep G2 (B) and Neuro-2A (C) whole cell lysates and human tonsil (D) and human testis (E) tissue extracts. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



Dynactin 5 (D-9): sc-518204. Western blot analysis of Dynactin 5 expression in K-562 (A) and Neuro-2A (B) whole cell lysates and human testis tissue extract (C). Detection reagent used: m-IgG Fc BP-HRP: sc-525408.

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.