

Dynactin 6 siRNA (m): sc-143205

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 6, also known as Protein WS-3, is an evolutionarily conserved component of the pointed-end-binding subcomplex of the Dynactin shoulder complex. This cytoplasmic protein is ubiquitously expressed in all tissues, suggesting that its function is essential for all organs. The pointed-end-binding subcomplex also consists of Dynactin 5, Dynactin p62 and ACTR10. Dynactin 6, along with Dynactin p62 and Dynactin 5, is believed to function in the regulation of Dynactin-membranous cargo interactions.

REFERENCES

1. Ichikawa, K., et al. 1997. Cloning and characterization of a novel gene, WS-3, in human chromosome 8p11-p12. *Gene* 189: 277-287.
2. 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.
3. 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.
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., et al. 2006. Cytoplasmic Dynein/Dynactin function and dysfunction in motor neurons. *Int. J. Dev. Neurosci.* 24: 103-111.
6. Dixit, R., et al. 2008. Regulation of Dynactin through the differential expression of p150^{Glued} isoforms. *J. Biol. Chem.* 283: 33611-33619.
7. Yang, J.S., et al. 2008. Dynein-Dynactin complex is essential for dendritic restriction of TM1-containing *Drosophila* Dscam. *PLoS ONE* 3: e3504.
8. Moore, J.K., et al. 2008. Dynactin function in mitotic spindle positioning. *Traffic* 9: 510-527.

CHROMOSOMAL LOCATION

Genetic locus: Dctn6 (mouse) mapping to 8 A4.

PRODUCT

Dynactin 6 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Dynactin 6 shRNA Plasmid (m): sc-143205-SH and Dynactin 6 shRNA (m) Lentiviral Particles: sc-143205-V as alternate gene silencing products.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Dynactin 6 siRNA (m) is recommended for the inhibition of Dynactin 6 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Dynactin 6 (B-6): sc-398694 is recommended as a control antibody for monitoring of Dynactin 6 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Dynactin 6 gene expression knockdown using RT-PCR Primer: Dynactin 6 (m)-PR: sc-143205-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.