

Dynein HC (R-325): sc-9115

BACKGROUND

Dyneins are multisubunit, high molecular weight ATPases that interact with microtubules to generate force by converting the chemical energy of ATP into the mechanical energy of movement. Cytoplasmic or axonemal Dynein heavy, intermediate, light and light-intermediate chains are all components of minus end-directed motors; the complex transports cellular cargos towards the central region of the cell. Axonemal Dynein motors contain one to three non-identical heavy chains and cause a sliding of microtubules in the axonemes of cilia and flagella in a mechanism necessary for cilia to beat and propel the cell. Cytoplasmic Dynein is an approximately 12 subunit complex of 2 heavy chains, 2 intermediate chains to anchor Dynein to its cargo, 4 smaller intermediate chains and several light chains. It performs functions necessary for cell survival such as organelle transport and centrosome assembly. The carboxy-terminus of Dynein is important for microtubule-dependent motility and is highly conserved, while the amino-terminal regions are more variable. Several proteins regulate Dynein activity, including dynactin, LIS1 and NudEL (NudE-like).

CHROMOSOMAL LOCATION

Genetic locus: DYNC1H1 (human) mapping to 14q32.31; Dync1h1 (mouse) mapping to 12 F1.

SOURCE

Dynein HC (R-325) is a rabbit polyclonal antibody raised against amino acids 4320-4644 of Dynein heavy chain of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dynein HC (R-325) is recommended for detection of Dynein heavy chain 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).

Dynein HC (R-325) is also recommended for detection of Dynein heavy chain in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Dynein HC siRNA (h): sc-43738, Dynein HC siRNA (m): sc-44778, Dynein HC shRNA Plasmid (h): sc-43738-SH, Dynein HC shRNA Plasmid (m): sc-44778-SH, Dynein HC shRNA (h) Lentiviral Particles: sc-43738-V and Dynein HC shRNA (m) Lentiviral Particles: sc-44778-V.

Molecular Weight of Dynein HC: 500 kDa.

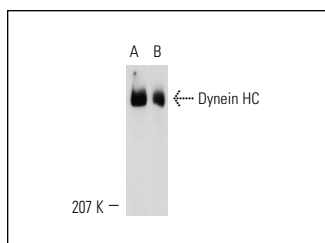
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

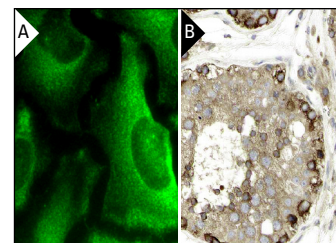
RESEARCH USE

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

DATA



Dynein HC (R-325): sc-9115. Western blot analysis of Dynein expression in L8 (A) and LNCaP (B) whole cell lysates.



Dynein HC (R-325): sc-9115. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in ductus deferens. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

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- Shi, P., et al. 2010. Effects of ALS-related SOD1 mutants on dynein- and KIF5-mediated retrograde and anterograde axonal transport. *Biochim. Biophys. Acta* 1802: 707-716.
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- Chaves, R.S., et al. 2013. Dynein c1h1, dynactin and syntaphilin expression in brain areas related to neurodegenerative diseases following exposure to rotenone. *Acta Neurobiol. Exp.* 73: 541-556.



Try **Dynein HC (C-5): sc-514579**, our highly recommended monoclonal alternative to Dynein HC (R-325).