



DNAH9 (M-220): sc-68369

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. DNAH9 (Dynein, axonemal, heavy chain 9), also known as DYH9, HL20, DNEL1, Dnahc9 or DNAH17L, is a member of the Dynein heavy chain family and comprises one of the heavy chain subunits of axonemal Dynein. DNAH9 consists of an N-terminal stem which is responsible for interacting with other Dynein components and binding cargo, and four P-loops that comprise the motor domain at its C-terminus.

REFERENCES

- Milisav, I., et al. 1996. Characterization of a novel human Dynein-related gene that is specifically expressed in testis. *Mamm. Genome* 7: 667-672.
- Milisav, I. and Affara, N.A. 1998. A potential human axonemal Dynein heavy-chain gene maps to 17q25. *Mamm. Genome* 9: 404-407.
- Bartoloni, L., et al. 2001. Axonemal β heavy chain Dynein DNAH9: cDNA sequence, genomic structure, and investigation of its role in primary ciliary dyskinesia. *Genomics* 72: 21-33.
- Carson, J.L., et al. 2002. Axonemal Dynein expression in human fetal tracheal epithelium. *Am. J. Physiol. Lung Cell Mol. Physiol.* 282: L421-L430.
- Asai, D.J., et al. 2004. The Dynein heavy chain family. *J. Eukaryot. Microbiol.* 51: 23-29.
- Seetharam, R.N., et al. 2005. High speed sliding of axonemal microtubules produced by outer arm Dynein. *Cell Motil. Cytoskeleton* 60: 96-103.
- Lee, W.L., et al. 2005. The offloading model for Dynein function: differential function of motor subunits. *J. Cell Biol.* 168: 201-207.
- Fliegau, M., et al. 2005. Mislocalization of DNAH5 and DNAH9 in respiratory cells from patients with primary ciliary dyskinesia. *Am. J. Respir. Crit. Care Med.* 171: 1343-1349.
- Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: DNAH9 (human) mapping to 17p12; Dnahc9 (mouse) mapping to 11 B3.

SOURCE

DNAH9 (M-220) is a rabbit polyclonal antibody raised against amino acids 1-220 mapping at the N-terminus of DNAH9 of mouse origin.

PRODUCT

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

APPLICATIONS

DNAH9 (M-220) is recommended for detection of DNAH9 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 DNAH9 siRNA (h): sc-62220, DNAH9 siRNA (m): sc-62221, DNAH9 shRNA Plasmid (h): sc-62220-SH, DNAH9 shRNA Plasmid (m): sc-62221-SH, DNAH9 shRNA (h) Lentiviral Particles: sc-62220-V and DNAH9 shRNA (m) Lentiviral Particles: sc-62221-V.

Molecular Weight of DNAH9: 512 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.