SANTA CRUZ BIOTECHNOLOGY, INC.

DNAH17 (E-12): sc-167650

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. DNAH17 (dynein, axonemal, heavy chain 17), also known as DNEL2, DNAHL1 or FLJ40457, is a 4,485 amino acid member of the dynein heavy chain protein family. Expressed in testis, DNAH17 contains 13 LRR repeats and 3 TPR repeats. DNAH17 is a force generating protein of respiratory cilia, and is thought to be involved in sperm motility through sperm flagellar assembly.

REFERENCES

1. Neesen, J., et al. 1997. Identification of dynein heavy chain genes expressed in human and mouse testis: chromosomal localization of an axonemal dynein gene. Gene 200: 193-202.
2. Milisav, I., et al. 1998. A potential human axonemal dynein heavy-chain gene maps to 17q25. Mamm. Genome 9: 404-407.
3. Carson, J.L., et al. 2002. Axonemal dynein expression in human fetal tracheal epithelium. Am. J. Physiol. Lung Cell Mol. Physiol. 282: L421-L430.
4. Fliegauf, 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.
5. Seetharam, R.N., et al. 2005. High speed sliding of axonemal microtubules produced by outer arm dynein. Cell Motil. Cytoskeleton 60: 96-103.
6. Jin, W.H., et al. 2005. Human plasma proteome analysis by multidimensional chromatography prefractionation and linear ion trap mass spectrometry identification. J. Proteome Res. 4: 613-619.

CHROMOSOMAL LOCATION

Genetic locus: DNAH17 (human) mapping to 17q25.3; Dnahc17 (mouse) mapping to 11 E2.

SOURCE

DNAH17 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DNAH17 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.

Blocking peptide available for competition studies, sc-167650 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.

APPLICATIONS

DNAH17 (E-12) is recommended for detection of DNAH17 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other DNAH family members.

Suitable for use as control antibody for DNAH17 siRNA (h): sc-93768, DNAH17 siRNA (m): sc-143077, DNAH17 shRNA Plasmid (h): sc-93768-SH, DNAH17 shRNA Plasmid (m): sc-143077-SH, DNAH17 shRNA (h) Lentiviral Particles: sc-93768-V and DNAH17 shRNA (m) Lentiviral Particles: sc-143077-V.

Molecular Weight of DNAH17 isoforms 1/2: 512/508 kDa.

Molecular Weight of DNAH17 isoforms 3/4: 93/65 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.