SANTA CRUZ BIOTECHNOLOGY, INC.

Tctex1 (E-17): sc-19185

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Tctex1 is a cytoplasmic dynein light chain found in a complex with Na^+ CP type Xα (SCN10A). Tctex1, also designated CW-1 or TCTEL1 is expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, prostate, testis, ovary, ileum and colon. Several proteins regulate Dynein activity, including dynactin, LIS1 and NudEL(NudE-like).

REFERENCES

1. Watanabe, T.K., et al. 1996. Cloning, expression, and mapping of TCTEL1, a putative human homologue of murine Tcte1, to 6q. Cytogenet. Cell Genet. 73: 153-156.
2. Asai, D.J., et al. 2004. The dynein heavy chain family. J. Eukaryot. Microbiol. 51: 23-29.
3. Chuang, J.Z., et al. 2005. The dynein light chain Tctex-1 has a dynein-independent role in actin remodeling during neurite outgrowth. Dev. Cell 9: 75-86.
4. Li, J., et al. 2005. NudEL targets dynein to microtubule ends through LIS1. Nat. Cell Biol. 7: 686-690.

CHROMOSOMAL LOCATION

Genetic locus: DYNLT1 (human) mapping to 6q25.3; Dynlt1a/Dynlt1b/Dynlt1c/Dynlt1f (mouse) mapping to 17 A1.

SOURCE

Tctex1 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tctex1 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-19185 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Tctex1 (E-17) is recommended for detection of Tctex1 of human origin, Dynlt1a, Dynlt1b, Dynlt1c and Dynlt1f of mouse origin, and the corresponding rat homolog by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

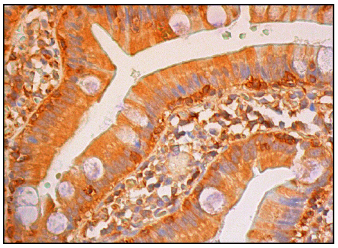
Tctex1 (E-17) is also recommended for detection of Tctex1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Tctex1 siRNA (h): sc-43319, Tctex1 shRNA Plasmid (h): sc-43319-SH and Tctex1 shRNA (h) Lentiviral Particles: sc-43319-V.

Molecular Weight of Tctex1: 14 kDa.

Positive Controls: Y79 cell lysate: sc-2240, IMR-32 cell lysate: sc-2409 or T98G cell lysate: sc-2294.

DATA



Tctex1 (E-17): sc-19185. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells and interstitial cells.

STORAGE

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

PROTOCOLS

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