SANTA CRUZ BIOTECHNOLOGY, INC.

Tctex2 (M-191): sc-48760

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tctex2 (T complex testis expressed 2) is one of the distorter genes of the mouse t haplotype. This complex is responsible for the transmission ratio distortion phenomenon, in which the chromosomes of heterozygous +/t males are preferentially segregated so that the t haplotype is transmitted to greater than 95% of the offspring. Transmission ratio distortion of t haplotypes involves dysfunction of both flagellar inner and outer Dynein arms. Tctex2 might be a light chain of flagellar outer arm Dynein, and the abortive phosphorylation of Tctex2/outer arm Dynein, light chain might be related to the less progressive movement of sperm. Tctex2 maps to the t-complex and encodes a membrane-associated protein found exclusively on the sperm tail.

REFERENCES

1. Huw, L.Y., Goldsborough, A.S., Willison, K. and Artzt, K. 1995. Tctex2: a sperm tail surface protein mapping to the T complex. Dev. Biol. 170: 183-194.
2. Harrison, A., Olds-Clarke, P. and King, S.M. 1998. Identification of the t complex-encoded cytoplasmic Dynein light chain Tctex1 in inner arm I1 supports the involvement of flagellar dyneins in meiotic drive. J. Cell Biol. 140: 1137-1147.
3. Inaba, K., Kagami, O. and Ogawa, K. 1999. Tctex2-related outer arm Dynein light chain is phosphorylated at activation of sperm motility. Biochem. Biophys. Res. Commun. 256: 177-183.
4. Pazour, G.J., Koutoulis, A., Benashski, S.E., Dickert, B.L., Sheng, H., Patel-King, R.S., King, S.M. and Witman, G.B. 1999. LC2, the *Chlamydomonas* homologue of the T complex-encoded protein Tctex2, is essential for outer Dynein arm assembly. Mol. Biol. Cell 10: 3507-3520.
5. Wang, W. and Chapin, R.E. 2000. Differential gene expression detected by suppression subtractive hybridization in the ethylene glycol monomethyl ether-induced testicular lesion. Toxicol. Sci. 56: 165-174.

CHROMOSOMAL LOCATION

Genetic locus: TCTE3 (human) mapping to 6q27; Tcte3 (mouse) mapping to 17 A1.

SOURCE

Tctex2 (M-191) is a rabbit polyclonal antibody raised against amino acids 1-191 representing full length Tctex2 of mouse origin.

PRODUCT

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

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.

APPLICATIONS

Tctex2 (M-191) is recommended for detection of Tctex2 long and short isoforms 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tctex2 siRNA (h): sc-43457 and Tctex2 siRNA (m): sc-43458.

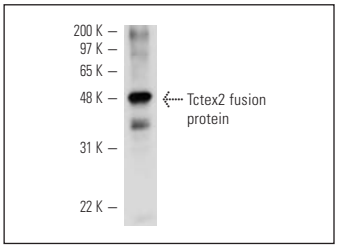
Molecular Weight of Tctex2 isoforms: 14/22 kDa.

Positive Controls: mouse testis extract: sc-2405.

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.

DATA



Tctex2 (FL-191): sc-48760. Western blot analysis of mouse recombinant Tctex2 fusion protein.

PROTOCOLS

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