SANTA CRUZ BIOTECHNOLOGY, INC.

dCtBP (dT-17): sc-26610

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Drosophila melanogaster is a proven and effective model for studying developmental and cellular processes common to higher eukaryotes. Approximately 13,600 genes have been elucidated from more than 120 megabases of euchromatin, and they are organized among the chromosomes 2, 3, 4, X and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes can be categorized based on the type of protein for which they encode and are represented by six major classifications, which include intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing, and chromatin associated) or other functional proteins. Morphogenesis and cell differentiation in *Drosophila* requires accurate control of cell division. The C-terminal binding protein (CtBP) family proteins of transcriptional regulators are conserved from worm to human, which function as co-repressors of a wide array of DNA-binding transcriptional repressors. Two co-repressors have been identified in the early *Drosophila* embryo: groucho and dCtBP. Both proteins are recruited to the DNA template by interacting with short peptide motifs conserved in a variety of sequence-specific transcriptional repressors. Once bound to DNA, groucho appears to mediate long-range repression, while dCtBP directs short-range repression.

REFERENCES

1. Lehner, C.F. 1991. Pulling the string: cell cycle regulation during *Drosophila* development. Semin. Cell Biol. 2: 223-231.
2. Adams, M.D., Celniker, S.E., Holt, R.A., Evans, C.A., Gocayne, J.D., Amanatides, P., et al. 2000. The genome sequence of *Drosophila melanogaster*. Science 287: 2185-2195.
3. Mata, J., Curado, S., Ephrussi, A. and Rorth, P. 2000. Tribbles coordinates mitosis and morphogenesis in *Drosophila* by regulating string/Cdc25 proteolysis. Cell 101: 511-522.
4. Nibu, Y., Zhang, H. and Levine, M. 2001. Local action of long-range repressors in the *Drosophila* embryo. EMBO J. 20: 2246-2253.
5. Subramanian, T. and Chinnadurai, G. 2004. Association of class I histone deacetylases with transcriptional corepressor CtBP. FEBS Lett. 540: 255-258.
6. The Interactive Fly. http://www.sdbonline.org/fly/aimain/1aahome.htm. http://www.sdbonline.org/fly/aimain/6biochem.htm

SOURCE

dCtBP (dT-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of dCtBP of *Drosophila melanogaster* 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-26610 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

dCtBP (dT-17) is recommended for detection of dCtBP of *Drosophila melanogaster* 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)] and 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).

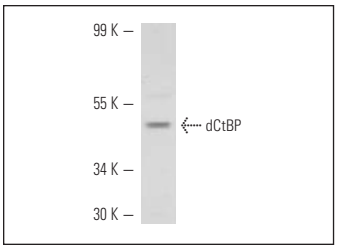
Molecular Weight of dCtBP: 48 kDa.

Positive Controls: Schneider's *Drosophila* line 2 whole cell lysate.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



dCtBP (dT-17): sc-26610. Western blot analysis of dCtBP expression in Schneider's *Drosophila* line 2 whole cell lysate.

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.