SANTA CRUZ BIOTECHNOLOGY, INC.

Cid (dI-16): sc-26887

BACKGROUND

Drosophila melanogaster, a proven and effective model for studying developmental and cellular processes common to higher eukaryotes, contains a genome encoding approximately 13,600 genes, which were elucidated from more than 120 megabases of euchromatin. These genes are organized among chromosomes 2, 3, 4, X, and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes, which are categorized based on the type of protein for which they encode, represent six major classifications, including intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing, and chromatin associated), and other functional proteins. Three histone H3-like proteins, which are unique chromatin components of centromeres, exist in *Drosophila*. They include histone H3, which packages the bulk genome, histone H3.3, which marks active chromatin, and Cid, the characteristic structural component of centromeric chromatin. Deposition of Cid persists throughout the cell cycle, and it is required for normal kinetochore formation and function as well as cell cycle progression.

REFERENCES

1. 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.
2. Malik, H.S. and Henikoff, S. 2001. Adaptive evolution of Cid, a centromere-specific histone in *Drosophila*. Genetics 157: 1293-1298.
3. Blower, M.D. and Karpen, G.H. 2001. The role of *Drosophila* CID in kinetochore formation, cell-cycle progression and heterochromatin interactions. Nat. Cell. Biol. 3: 730-739.
4. Ahmad, K. and Henikoff, S. 2002. Histone H3 variants specify modes of chromatin assembly. Proc. Natl. Acad. Sci. USA 99: 16477-16484.
5. The Interactive Fly. http://sdb.bio.purdue.edu/fly/aimain/1aahome.htm. http://sdb.bio.purdue.edu/fly/aimain/6biochem.htm

SOURCE

Cid (dI-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cid 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-26887 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

Cid (dI-16) is recommended for detection of Cid of *Drosophila melanogaster* 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).

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.