SANTA CRUZ BIOTECHNOLOGY, INC.

String (dC-16): sc-26906

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. Morphogenesis and cell differentiation in *Drosophila* requires accurate control of cell division. String, the *Drosophila* homologue of the Cdc25 phosphatase, regulates entry into mitosis by activating Cdk1. Specifically, String participates in cycle cell regulation and cell fate determination during eye development.

REFERENCES

1. Lehner, C.F. 1991. Pulling the string: cell cycle regulation during *Drosophila* development. Semin. Cell Biol. 2: 223-231.
2. Lehman, D.A., Patterson, B., Johnston, L.A., Balzer, T., Britton, J.S., Saint, R. and Edgar, B.A. 1999. Cis-regulatory elements of the mitotic regulator, string/Cdc25. Development 126: 1793-1803.
3. Mozer, B.A. and Easwarachandran, K. 1999. Pattern formation in the absence of cell proliferation: tissue-specific regulation of cell cycle progression by string (stg) during *Drosophila* eye development. Dev. Biol. 213: 54-69.
4. 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.
5. 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.
6. Society for Developmental Biology. 2003. The Interactive Fly. http://sdb.bio.purdue.edu/fly/aimain/1aahome.htm and http://sdb.bio.purdue.edu/fly/aimain/6biochem.htm.

SOURCE

String (dC-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of String 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-26906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

String (dC-16) is recommended for detection of String 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.

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.