SANTA CRUZ BIOTECHNOLOGY, INC.

Swallow (dE-13): sc-26993

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. These 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. The maternal effect gene Swallow (Swa) localizes Bicoid (Bcd) and Adducin-like/hu-li tai shao (hts) mRNA to the anterior pole during oogenesis. It functions as an adaptor bridging Bcd mRNA to dynein, a molecular motor that transports the complex anteriorly along microtubules.

REFERENCES

1. Zaccai, M. and Lipshitz, H.D. 1996. Role of Adducin-like (hu-li tai shao) mRNA and protein localization in regulating cytoskeletal structure and function during *Drosophila* oogenesis and early embryogenesis. Dev. Genet. 19: 249-57.
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. Pokrywka, N.J., Fishbein, L. and Frederick, J. 2000. New phenotypes associated with the swallow gene of *Drosophila*: evidence for a general role in oocyte cytoskeletal organization. Dev. Genes Evol. 210: 426-435.
4. Schnorrer, F., Bohmann, K. and Nusslein-Volhard, C. 2000. The molecular motor dynein is involved in targeting swallow and bicoid RNA to the anterior pole of *Drosophila* oocytes. Nat. Cell Biol. 2: 185-190.
5. Meng, J. and Stephenson, E.C. 2002. Oocyte and embryonic cytoskeletal defects caused by mutations in the *Drosophila* Swallow gene. Dev. Genes Evol. 212: 239-247.
6. The Interactive Fly. http://www.sdbonline.org/fly/aimain/1aahome.htm. http://www.sdbonline.org/fly/aimain/6biochem.htm

SOURCE

Swallow (dE-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Swallow 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-26993 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

Swallow (dE-13) is recommended for detection of Swallow 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.

PROTOCOLS

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