SANTA CRUZ BIOTECHNOLOGY, INC.

Vasa (d-260): sc-30210

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. Vasa is a DEAD-box protein that localizes to the perinuclear region of nurse cells during early oogenesis and later to the pole plasm at the posterior end of the oocyte. Vasa influences normal oocyte differentiation, anterior-posterior egg chamber patterning, dorsal-ventral follicle patterning, posterior embryonic patterning and pole cell specification.

REFERENCES

1. Liang, L., et al. 1994. Localization of Vasa protein to the *Drosophila* pole plasm is independent of its RNA-binding and helicase activities. Development 120: 1201-1211.
2. Styhler, S., et al. 1998. Vasa is required for GURKEN accumulation in the oocyte, and is involved in oocyte differentiation and germline cyst development. Development 125: 1569-1578.
3. Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster*. Science 287: 2185-2295.
4. The Interactive Fly. http://sdb.bio.purdue.edu/fly/aimain/1aahome.htm. http://sdb.bio.purdue.edu/fly/aimain/6biochem.htm.

SOURCE

Vasa (d-260) is a rabbit polyclonal antibody raised against amino acids 1-260 mapping at the N-terminus of Vasa 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Vasa (d-260) is recommended for detection of Vasa 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)], 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 Vasa: 83 kDa.

Positive Controls: Shneider's *Drosophila* whole cell lysate.

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.

SELECT PRODUCT CITATIONS

1. Jaglarz, M.K., et al. 2011. Nuage morphogenesis becomes more complex: two translocation pathways and two forms of nuage coexist in *Drosophila* germline syncytia. Cell Tissue Res. 344: 169-181.
2. Neumüller, R.A., et al. 2012. Stringent analysis of gene function and protein-protein interactions using fluorescently tagged genes. Genetics 190: 931-940.
3. Azzam, G., et al. 2012. *Drosophila* Argonaute 1 and its miRNA biogenesis partners are required for oocyte formation and germline cell division. Dev. Biol. 365: 384-394.
4. Preall, J.B., et al. 2012. shutdown is a component of the *Drosophila* piRNA biogenesis machinery. RNA 18: 1446-1457.
5. Issigonis, M. and Matunis, E. 2012. The *Drosophila* Bcl6 homolog ken and barbie promotes somatic stem cell self-renewal in the testis niche. Dev. Biol. 368: 181-192.
6. Roth, T.M., et al. 2012. Centrosome misorientation mediates slowing of the cell cycle under limited nutrient conditions in *Drosophila* male germline stem cells. Mol. Biol. Cell 23: 1524-1532.
7. Yuan, H., et al. 2012. Regulation of cyclin A localization downstream of Par-1 function is critical for the centrosome orientation checkpoint in *Drosophila* male germline stem cells. Dev. Biol. 361: 57-67.

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.