SANTA CRUZ BIOTECHNOLOGY, INC.

Vasa (C-2): sc-514249

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

VASA is a 724 amino acid, ATP-dependent RNA helicase that belongs to the DEAD-box family. VASA is specifically expressed in germline cells throughout the life cycle and is undetectable in somatic tissues. In vertebrates, VASA is restricted to bisexually reproducing organisms. It is cytoplasmic and is present only in migratory primordial germ cells in the region of the gonadal ridge. On testicular sections, VASA expression is the highest in spermatogonia, reduced in spermatocytes, low in spermatids and absent in sperm. In the ovary, VASA expression is the highest in oogonia but persists throughout oogenesis. VASA has a glycine-rich N-terminus with multiple repeats of an RGG motif believed to function in RNA binding. Specifically, it regulates the translation of intricate mRNAs that are essential for differentiation.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605281. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Honecker, F., Stoop, H., de Krijger, R.R., Chris Lau, Y.F., Bokemeyer, C. and Looijenga, L.H. 2004. Pathobiological implications of the expression of markers of testicular carcinoma *in situ* by fetal germ cells. J. Pathol. 203: 849-857.
4. Pennetier, S., Uzbekova, S., Perreau, C., Papillier, P., Mermillod, P. and Dalbiès-Tran, R. 2004. Spatio-temporal expression of the germ cell marker genes MATER, ZAR1, GDF9, BMP15 and VASA in adult bovine tissues, oocytes, and preimplantation embryos. Biol. Reprod. 71: 1359-1366.
5. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. Clin. Biochem. 38: 499-503.
6. Stoop, H., Honecker, F., Cools, M., de Krijger, R., Bokemeyer, C. and Looijenga, L.H. 2005. Differentiation and development of human female germ cells during prenatal gonadogenesis: an immunohistochemical study. Hum. Reprod. 20: 1466-1476.

SOURCE

Vasa (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-21 at the N-terminus of Vasa of *Drosophila melanogaster* origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vasa (C-2) is available conjugated to agarose (sc-514249 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514249 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-514249 PE), fluorescein (sc-514249 FITC), Alexa Fluor® 488 (sc-514249 AF488) or Alexa Fluor® 647 (sc-514249 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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APPLICATIONS

Vasa (C-2) is recommended for detection of Vasa of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:100, 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).

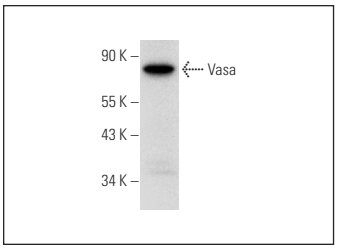
Molecular Weight of Vasa: 83 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Vasa (C-2): sc-514249. Western blot analysis of Vasa 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 for detailed protocols and support products.