SANTA CRUZ BIOTECHNOLOGY, INC.

VASA (2F9H5): sc-517247

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.

CHROMOSOMAL LOCATION

Genetic locus: DDX4 (human) mapping to 5q11.2.

SOURCE

VASA (2F9H5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-160 of VASA of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VASA (2F9H5) is available conjugated to agarose (sc-517247 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-517247 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517247 PE), fluorescein (sc-517247 FITC), Alexa Fluor® 488 (sc-517247 AF488), Alexa Fluor® 546 (sc-517247 AF546), Alexa Fluor® 594 (sc-517247 AF594) or Alexa Fluor® 647 (sc-517247 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-517247 AF680) or Alexa Fluor® 790 (sc-517247 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VASA (2F9H5) is recommended for detection of VASA of human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VASA siRNA (h): sc-61772, VASA shRNA Plasmid (h): sc-61772-SH and VASA shRNA (h) Lentiviral Particles: sc-61772-V.

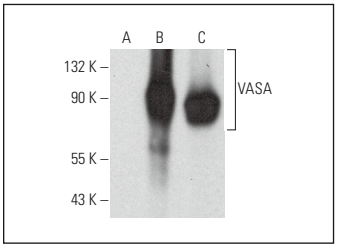
Molecular Weight of VASA: 83 kDa.

Positive Controls: VASA (h): 293T Lysate: sc-111520 or human testis extract: sc-363781.

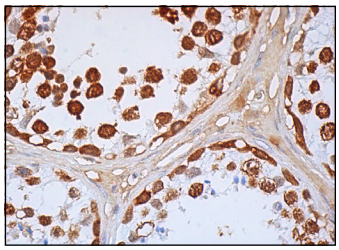
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



VASA (2F9H5): sc-517247. Western blot analysis of VASA expression in non-transfected 293T: sc-117752 (**A**) and human VASA transfected 293T: sc-111520 (**B**) whole cell lysates and human testis tissue extract (**C**).



VASA (2F9H5): sc-517247. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

1. Castillo, J., et al. 2019. Human testis phosphoproteome reveals kinases as potential targets in spermatogenesis and testicular cancer. Mol. Cell. Proteomics 18: S132-S144.
2. Chen, W., et al. 2020. Hsa-miR-1908-3p mediates the self-renewal and apoptosis of human spermatogonial stem cells via targeting KLF2. Mol. Ther. Nucleic Acids 20: 788-800.

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.