

VASA (N-14): sc-48707

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

1. Castrillon, D.H., et al. 2000. The human VASA gene is specifically expressed in the germ cell lineage. *Proc. Natl. Acad. Sci. USA* 97: 9585-9590.
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., et al. 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., et al. 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., et al. 2005. Differentiation and development of human female germ cells during prenatal gonadogenesis: an immunohistochemical study. *Hum. Reprod.* 20: 1466-1476.

CHROMOSOMAL LOCATION

Genetic locus: DDX4 (human) mapping to 5q11.2; Ddx4 (mouse) mapping to 13 D2.2.

SOURCE

VASA (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VASA of human 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-48707 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

VASA (N-14) is recommended for detection of VASA of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). VASA (N-14) is also recommended for detection of VASA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VASA siRNA (h): sc-61772, VASA siRNA (m): sc-61773, VASA shRNA Plasmid (h): sc-61772-SH, VASA shRNA Plasmid (m): sc-61773-SH, VASA shRNA (h) Lentiviral Particles: sc-61772-V and VASA shRNA (m) Lentiviral Particles: sc-61773-V.

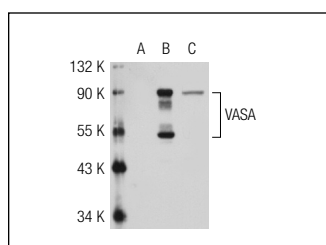
Molecular Weight of VASA: 83 kDa.

Positive Controls: rat testis extract: sc-2400.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



VASA (N-14): sc-48707. Western blot analysis of VASA expression in non-transfected: sc-117752 (A) and human VASA transfected: sc-111520 (B) 293T whole cell lysates and rat testis tissue extract (C).

RESEARCH USE

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

MONOS
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Try **VASA (2F9H5): sc-293158** or **VASA (L18Z): sc-80427**, our highly recommended monoclonal alternatives to VASA (N-14).