

vanin-1 (M-20): sc-16780

BACKGROUND

Hematopoietic precursor cells migrate to the thymus, where they differentiate into mature T lymphocytes. GPI-anchored vanin-1 protein regulates the late adhesion steps of thymus homing of bone marrow precursor cells. Vanin-1 is ubiquitously expressed as a pantetheinase enzyme and catalyzes the hydrolysis of pantetheine for vitamin B5 recycling. The hydrolytic activity of vanin-1 generates the potent antioxidant cysteamine as a metabolite. As a membrane bound pantetheinase, vanin-1 provides the main source of cysteamine under normal physiological conditions. In mice, vanin-1 is expressed specifically in male Sertoli cells of the developing testis, where it aids in cell migration. Vanin-1 is also expressed in human spleen, liver, and small intestine, where it may be involved in salvaging vitamin B5. The gene encoding human vanin-1 maps to chromosome 6q23.2. Other members of the vanin family include vanin-2 and vanin-3.

REFERENCES

1. Dupre, S., et al. 1970. The enzymatic breakdown of pantethine to pantothenic acid and cystamine. *Eur. J. Biochem.* 16: 571-578.
2. Aurrand-Lions, M., et al. 1996. Vanin-1, a novel GPI-linked perivascular molecule involved in thymus homing. *Immunity* 5: 391-405.
3. Galland, F., et al. 1998. Two human genes related to murine vanin-1 are located on the long arm of human chromosome 6. *Genomics* 53: 203-213.
4. Bowles, J., et al. 2000. A subtractive gene expression screen suggests a role for vanin-1 in testis development in mice. *Genesis* 27: 124-135.

CHROMOSOMAL LOCATION

Genetic locus: Vnn1 (mouse) mapping to 10 A4.

SOURCE

vanin-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of vanin-1 of mouse 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-16780 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.

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

vanin-1 (M-20) is recommended for detection of vanin-1 of mouse and rat 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).

Suitable for use as control antibody for vanin-1 siRNA (m): sc-36808, vanin-1 shRNA Plasmid (m): sc-36808-SH and vanin-1 shRNA (m) Lentiviral Particles: sc-36808-V.

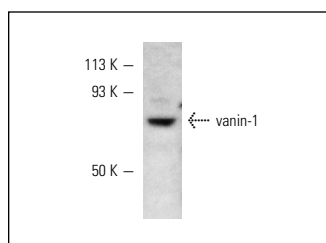
Molecular Weight of vanin-1: 70 kDa.

Positive Controls: mouse thymus extract: sc-2406.

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



vanin-1 (M-20): sc-16780. Western blot analysis of vanin-1 expression in mouse thymus extract.

SELECT PRODUCT CITATIONS

1. Kirpich, I.A., et al. 2010. Integrated hepatic transcriptome and proteome analysis of mice with high-fat diet-induced nonalcoholic fatty liver disease. *J. Nutr. Biochem.* E-published.



Try **vanin-1 (407): sc-23907**, our highly recommended monoclonal alternative to vanin-1 (M-20).