

## vanin-2 (S-14): sc-241112

### BACKGROUND

The vanin gene family encodes secreted and membrane-bound ectoenzymes that convert pantetheine into pantothenic acid and cysteamine. Members of the vanin family include vanin-1, vanin-2 and vanin-3. Members of the vanin family catalyze the hydrolysis of pantetheine for vitamin B5 recycling. Vanin-2, also known as VNN2, FOAP-4 or GPI-80, is a 520 amino acid GPI-anchor protein that belongs to the CN hydrolase family and BTD/VNN subfamily. Widely expressed with high expression in spleen and blood, vanin-2 is suggested to be involved in thymus homing of bone marrow cells, regulation of Integrin  $\beta$ 2-mediated cell adhesion, and migration and motility of neutrophils. Vanin-2 exists as five alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 6q23.2.

### REFERENCES

- Dupre, S., Graziani, M.T., Rosei, M.A., Fabi, A. and Del Grosso, E. 1970. The enzymatic breakdown of pantetheine to pantothenic acid and cysteamine. *Eur. J. Biochem.* 16: 571-578.
- Aurrand-Lions, M., Galland, F., Bazin, H., Zakharyev, V.M., Imhof, B.A. and Naquet, P. 1996. Vanin-1, a novel GPI-linked perivascular molecule involved in thymus homing. *Immunity* 5: 391-405.
- Galland, F., Malergue, F., Bazin, H., Mattei, M.G., Aurrand-Lions, M., Theillet, C. and Naquet, P. 1998. Two human genes related to murine vanin-1 are located on the long arm of human chromosome 6. *Genomics* 53: 203-213.
- Pitari, G., Marlergue, F., Martin, F., Philippe, J.M., Massucci, M.T., Chabret, C., Maras, B., Dupre, S., Naquet, P. and Galland, F. 2000. Pantetheinase activity of membrane-bound Vanin-1: lack of free cysteamine in tissues of Vanin-1 deficient mice. *FEBS Lett.* 483: 149-154.
- Bowles, J., Bullejos, M. and Kopman, P. 2000. A subtractive gene expression screen suggests a role for vanin-1 in testis development in mice. *Genesis* 27: 124-135.
- Grimmond, S., Van Hateren, N., Siggers, P., Arkell, R., Larder, R., Soares, M.B., de Fatima Bonaldo, M., Smith, L., Tyowska-Lalanne, Z., Wells, C. and Greenfield, A. 2000. Sexually dimorphic expression of protease nexin-1 and vanin-1 in the developing mouse gonad prior to overt differentiation suggests a role in mammalian sexual development. *Hum. Mol. Genet.* 9: 1553-1560.
- Jansen, P.A., Kamsteeg, M., Rodijk-Olthuis, D., van Vlijmen-Willems, I.M., de Jongh, G.J., Bergers, M., Tjabringa, G.S., Zeeuwen, P.L. and Schalkwijk, J. 2009. Expression of the vanin gene family in normal and inflamed human skin: induction by proinflammatory cytokines. *J. Invest. Dermatol.* 129: 2167-2174.

### CHROMOSOMAL LOCATION

Genetic locus: VNN2 (human) mapping to 6q23.2.

### SOURCE

vanin-2 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of vanin-2 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241112 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

vanin-2 (S-14) is recommended for detection of vanin-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with vanin-1 or vanin-3.

Suitable for use as control antibody for vanin-2 siRNA (h): sc-95407, vanin-2 shRNA Plasmid (h): sc-95407-SH and vanin-2 shRNA (h) Lentiviral Particles: sc-95407-V.

Molecular Weight of vanin-2 isoforms: 58/33/22/21/13 kDa.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.