SANTA CRUZ BIOTECHNOLOGY, INC.

vanin-3 (C-17): sc-169770

BACKGROUND

The vanin family is a novel group of ectoenzymes that function in tissue repair and convert pantetheine into pantothenic acid (vitamin B5) and cysteamine. As both secreted and membrane proteins, members of the vanin family have been implicated as therapeutic targets in inflammatory disease. Vanin-3 (vascular non-inflammatory molecule 3), also known as VNN3, is a 501 amino acid GPI-anchored amidohydrolase that is widely expressed and is found at highest levels in blood and liver. Vanin-3 is overexpressed in lesional psoriatic skin and exists as eight alternatively spliced isoforms. Induced by Th17/Th1 type cytokines, vanin-3 hydrolyzes carboamide linkages in D-pantetheine, thereby releasing cysteamine while recycling pantothenic acid. Containing one CN hydrolase domain, vanin-3 is encoded by a gene that maps to human chromosome 6q23.2.

REFERENCES

1. Maras, B., et al. 1999. Is pantetheinase the actual identity of mouse and human vanin-1 proteins? FEBS Lett. 461: 149-152.
2. Granjeaud, S., et al. 1999. An ESTs description of the new Vanin gene family conserved from fly to human. Immunogenetics 49: 964-972.
3. Pitari, G., et al. 2000. Pantetheinase activity of membrane-bound Vanin-1: lack of free cysteamine in tissues of Vanin-1 deficient mice. FEBS Lett. 483: 149-154.
4. Martin, F., et al. 2001. Vanin genes are clustered (human 6q22-24 and mouse 10A2B1) and encode isoforms of pantetheinase ectoenzymes. Immunogenetics 53: 296-306.
5. Nitto, T., et al. 2008. Alternative spliced variants in the pantetheinase family of genes expressed in human neutrophils. Gene 426: 57-64.
6. Jansen, P.A., et al. 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: VNN3 (human) mapping to 6q23.2.

SOURCE

vanin-3 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of vanin-3 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-169770 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

vanin-3 (C-17) is recommended for detection of vanin-3 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-2.

vanin-3 (C-17) is also recommended for detection of vanin-3 in additional species, including equine and porcine.

Suitable for use as control antibody for vanin-3 siRNA (h): sc-95073, vanin-3 shRNA Plasmid (h): sc-95073-SH and vanin-3 shRNA (h) Lentiviral Particles: sc-95073-V.

Molecular Weight of vanin-3 isoforms: 56/31/13/17/23/15/14/18 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™ 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) 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.

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.