SANTA CRUZ BIOTECHNOLOGY, INC.

VAT1 (G-12): sc-107348

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TThe storage and release of neurotransmitters in the nerve terminal is regulated by synaptic vesicles. In response to an intracellular increase in calicum levels, synaptic vesicles open and release neurotransmitters across the neuronal synapse, thereby propagating nerve impulses between neurons. VAT1 (vesicle amine transport protein 1) is a 393 amino acid integral membrane protein that is located within cholinergic synaptic vesicles. Expressed in tissues throughout the body, VAT1 belongs to the quinone oxidoreductase subfamily of zinc-containing alcohol dehydrogenase proteins and is thought to play a role in vesicular transport. Defects in the gene encoding VAT1 may be associated with endocrine disorders and tumorigenesis.

REFERENCES

1. Linial, M., Miller, K. and Scheller, R.H. 1989. VAT-1: an abundant membrane protein from torpedo cholinergic synaptic vesicles. Neuron 2: 1265-1273.
2. Peter, D., Finn, J.P., Klisak, I., Liu, Y., Kojis, T., Heinzmann, C., Roghani, A., Sparkes, R.S. and Edwards, R.H. 1993. Chromosomal localization of the human vesicular amine transporter genes. Genomics 18: 720-723.
3. Friedman, L.S., Ostermeyer, E.A., Lynch, E.D., Szabo, C.I., Anderson, L.A., Dowd, P., Lee, M.K., Rowell, S.E., Boyd, J. and King, M.C. 1994. The search for BRCA1. Cancer Res. 54: 6374-6382.
4. Miki, Y., Swensen, J., Shattuck-Eidens, D., Futreal, P.A., Harshman, K., Tavtigian, S., Liu, Q., Cochran, C., Bennett, L.M. and Ding, W. 1994. A strong candidate for the breast and ovarian cancer susceptibility gene BRCA1. Science 266: 66-71.
5. Smith, T.M., Lee, M.K., Szabo, C.I., Jerome, N., McEuen, M., Taylor, M., Hood, L. and King, M.C. 1996. Complete genomic sequence and analysis of 117 kb of human DNA containing the gene BRCA1. Genome Res. 6: 1029-1049.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604631. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: VAT1 (human) mapping to 17q21.31; Vat1 (mouse) mapping to 11 D.

SOURCE

VAT1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VAT1 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-107348 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-107348 X, 200 µg/0.1 ml.

APPLICATIONS

VAT1 (G-12) is recommended for detection of VAT1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

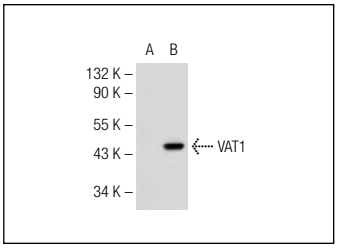
Suitable for use as control antibody for VAT1 siRNA (h): sc-93942, VAT1 siRNA (m): sc-155094, VAT1 shRNA Plasmid (h): sc-93942-SH, VAT1 shRNA Plasmid (m): sc-155094-SH, VAT1 shRNA (h) Lentiviral Particles: sc-93942-V and VAT1 shRNA (m) Lentiviral Particles: sc-155094-V.

VAT1 (G-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

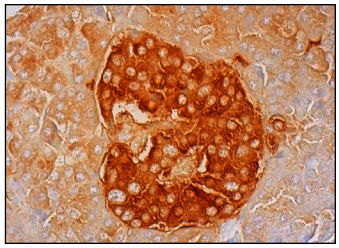
Molecular Weight of VAT1: 42 kDa.

Positive Controls: VAT1 (h): 293T Lysate: sc-111591.

DATA



VAT1 (G-12): sc-107348. Western blot analysis of VAT1 expression in non-transfected: sc-117752 (**A**) and human VAT1 transfected: sc-111591 (**B**) 293T whole cell lysates.



VAT1 (G-12): sc-107348. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

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.