SANTA CRUZ BIOTECHNOLOGY, INC.

VMAT 1 (M-19): sc-7720

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurotransmission depends on the regulated exocytotic release of chemical transmitter molecules. This requires the packaging of these substances into the specialized secretory vesicles of neurons and neuroendocrine cells, a process mediated by specific vesicular transporters. The family of genes encoding the vesicular transporters of monoamines (VMAT 1 and VMAT 2) and acetylcholine (VACht) have been cloned and functionally characterized. The sequence of these integral membrane proteins predicts twelve transmembrane domains and weak homology to a class of bacterial antibiotic resistance proteins. The vesicular transport of neurotransmitter molecules has been shown to be an active ATP- and proton dependent transport mechanism.

REFERENCES

1. Roghani, A., et al. 1994. Molecular cloning of a putative vesicular transporter for acetylcholine. Proc. Natl. Acad. Sci. USA 91: 10620-10624.
2. Henry, J.P., et al. 1994. Biochemistry and molecular biology of the vesicular monoamine transporter from chromaffin granules. J. Exp. Biol. 196: 251-262.

CHROMOSOMAL LOCATION

Genetic locus: SLC18A1 (human) mapping to 8p21.3; Slc18a1 (mouse) mapping to 8 B3.3.

SOURCE

VMAT 1 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of VMAT 1 of rat 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-7720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VMAT 1 (M-19) is recommended for detection of VMAT 1 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).

Suitable for use as control antibody for VMAT 1 siRNA (h): sc-42324, VMAT 1 siRNA (m): sc-42325, VMAT 1 shRNA Plasmid (h): sc-42324-SH, VMAT 1 shRNA Plasmid (m): sc-42325-SH, VMAT 1 shRNA (h) Lentiviral Particles: sc-42324-V and VMAT 1 shRNA (m) Lentiviral Particles: sc-42325-V.

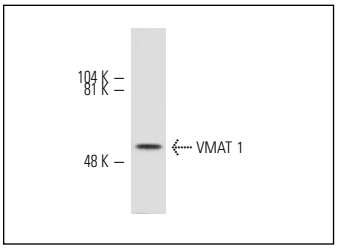
Molecular Weight of VMAT 1: 55 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, SW-13 cell lysate: sc-24778, ALL-SIL cell lysate, AML-193 cell lysate, MIA PaCa-2 cell lysate: sc-2285 or CCRF-CEM cell lysate: sc-2225.

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



VMAT 1 (M-19): sc-7720. Western blot analysis of VMAT 1 expression in Caki-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wightman, J., et al. 2002. Retinoic acid-induced growth arrest and differentiation: retinoic acid up-regulates CD32 (Fc γRII) expression, the ectopic expression of which retards the cell cycle. Mol. Cancer Ther. 1: 493-506.

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.