

# VMAT 1 (C-19): sc-7718

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: SLC18A1 (human) mapping to 8p21.3.

## SOURCE

VMAT 1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of VMAT 1 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-7718 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.

## APPLICATIONS

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

VMAT 1 (C-19) is also recommended for detection of VMAT 1 in additional species, including equine.

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

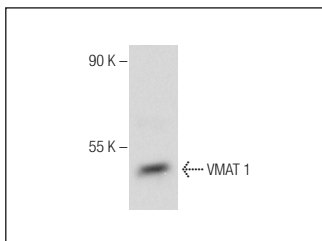
Molecular Weight of VMAT 1: 55 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, Caki-1 cell lysate: sc-2224 or SW-13 cell lysate: sc-24778.

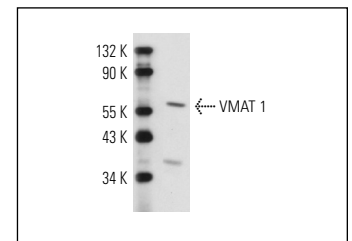
## RECOMMENDED SECONDARY REAGENTS

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 (C-19): sc-7718. Western blot analysis of VMAT 1 expression in MIA PaCa-2 whole cell lysate.



VMAT 1 (C-19): sc-7718. Western blot analysis of VMAT 1 expression in Caki-1 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Amenta, F., et al. 2001. Identification of dopamine plasma membrane and vesicular transporters in human peripheral blood lymphocytes. *J. Neuroimmunol.* 117: 133-142.
- Jakobsen, A.M., et al. 2001. Differential expression of vesicular monoamine transporter (VMAT) 1 and 2 in gastrointestinal endocrine tumours. *J. Pathol.* 195: 463-472.
- Kölby, L., et al. 2001. A transplantable human carcinoid as model for somatostatin receptor-mediated and amine transporter-mediated radionuclide uptake. *Am. J. Pathol.* 158: 745-755.
- Lohoff, F.W., et al. 2006. Variations in the vesicular monoamine transporter 1 gene (VMAT 1/SLC18A1) are associated with bipolar disorder. *Neuropsychopharmacology* 31: 2739-2747.
- Cui, T., et al. 2013. Olfactory receptor 51E1 protein as a potential novel tissue biomarker for small intestine neuroendocrine carcinomas. *Eur. J. Endocrinol.* 168: 253-261.
- Lohoff, F.W., et al. 2013. Functional genetic variants in the vesicular monoamine transporter 1 modulate emotion processing. *Mol. Psychiatry.* 19: 129-139.

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Try **VMAT 1 (G-12): sc-166391**, our highly recommended monoclonal alternative to VMAT 1 (C-19).