SANTA CRUZ BIOTECHNOLOGY, INC.

VMAT 2 (H-90): sc-15314

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: SLC18A2 (human) mapping to 10q25.3; Slc18a2 (mouse) mapping to 19 D3.

SOURCE

VMAT 2 (H-90) is a rabbit polyclonal antibody raised against amino acids 44-133 mapping near the N-terminus of VMAT 2 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.

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.

APPLICATIONS

VMAT 2 (H-90) is recommended for detection of VMAT 2 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 VMAT 2 siRNA (h): sc-36824, VMAT 2 siRNA (m): sc-36825, VMAT 2 shRNA Plasmid (h): sc-36824-SH, VMAT 2 shRNA Plasmid (m): sc-36825-SH, VMAT 2 shRNA (h) Lentiviral Particles: sc-36824-V and VMAT 2 shRNA (m) Lentiviral Particles: sc-36825-V.

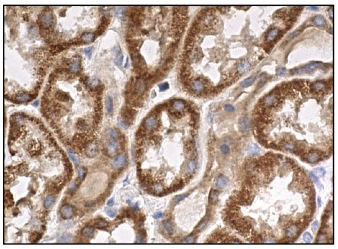
Molecular Weight of VMAT 2: 63 kDa.

Positive Controls: rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



VMAT 2 (H-90): sc-15314. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Gerhard, M., et al. 2001. Gastrin induces expression and promoter activity of the vesicular monoamine transporter subtype 2. Endocrinology 142: 3663-3672.
2. Rössler, R., et al. 2010. Differentiation of non-mesencephalic neural stem cells towards dopaminergic neurons. Neuroscience 170: 417-428.
3. Keller, C.M., et al. 2011. Biphasic dopamine regulation in mesoaccumbens pathway in response to non-contingent binge and escalating methamphetamine regimens in the Wistar rat. Psychopharmacology 215: 513-526.
4. Ohta, Y., et al. 2011. Electron tomographic analysis of gap junctions in lateral giant fibers of crayfish. J. Struct. Biol. 175: 49-61.
5. Capellino, S., et al. 2012. First appearance and location of catecholaminergic cells during experimental arthritis and elimination by chemical sympathectomy. Arthritis Rheum. 64: 1110-1118.