

VMAT 2 (H-12): sc-374079

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-12) is a mouse monoclonal antibody raised against amino acids 44-133 mapping near the N-terminus of VMAT 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VMAT 2 (H-12) is available conjugated to agarose (sc-374079 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374079 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374079 PE), fluorescein (sc-374079 FITC), Alexa Fluor® 488 (sc-374079 AF488), Alexa Fluor® 546 (sc-374079 AF546), Alexa Fluor® 594 (sc-374079 AF594) or Alexa Fluor® 647 (sc-374079 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374079 AF680) or Alexa Fluor® 790 (sc-374079 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

VMAT 2 (H-12) is recommended for detection of VMAT 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

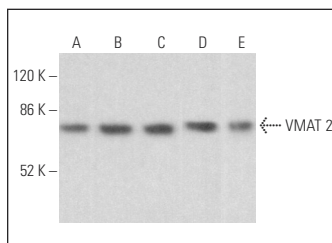
Molecular Weight of VMAT 2: 63 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, NIH/3T3 whole cell lysate: sc-2210 or rat brain extract: sc-2392.

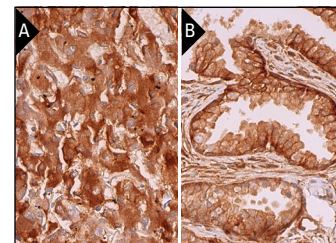
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



VMAT 2 (H-12): sc-374079. Western blot analysis of VMAT 2 expression in NIH/3T3 (A), MEG-01 (B), HEL 92.1.7 (C) and IMR-32 (D) whole cell lysates and rat brain tissue extract (E).



VMAT 2 (H-12): sc-374079. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Balakrishnan, R., et al. 2021. Isolongifolene mitigates rotenone-induced dopamine depletion and motor deficits through anti-oxidative and anti-apoptotic effects in a rat model of Parkinson's disease. *J. Chem. Neuroanat.* 112: 101890.
- Metz, V.G., et al. 2021. Cannabidiol prevents amphetamine relapse and modulates D1- and D2-receptor levels in mesocorticolimbic brain areas of rats. *Eur. Neuropsychopharmacol.* 50: 23-33.
- Ryu, I.S., et al. 2021. Effects of β-phenylethylamine on psychomotor, rewarding, and reinforcing behaviors and affective state: the role of dopamine D1 receptors. *Int. J. Mol. Sci.* 22: 9485.
- Mpekoulis, G., et al. 2021. Association of hepatitis C virus replication with the catecholamine biosynthetic pathway. *Viruses* 13: 2139.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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