

VMaT 2

Cat.No. 138 313; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: not tested yet IP: not tested yet ICC: not tested yet IHC: 1 : 200 up to 1 : 500 IHC-P/FFPE: not tested yet
Immunogen	Synthetic peptide corresponding to AA 1 to 20 from mouse VMaT2 (UniProt Id: Q8BRU6)
Reactivity	Reacts with: rat (Q8BRU6), mouse (Q8BRU6). Other species not tested yet.
Specificity	Specific for rat VMaT 2.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Vesicular monoamine transporters **VMaTs** mediate the translocation of monoamines (serotonin, histamine, dopamine) from the cytoplasm into secretory vesicles by using a proton electrochemical gradient.

VMaTs are integral membrane proteins with 12 putative trans-membrane domains predicted by sequence analysis. Both, the N- and C-terminus of the proteins are located on the cytoplasmic side. Two VMaT isoforms, VMaT 1 and **VMaT 2**, have been described. It has been proposed that VMaT 1 transports monoamines into large dense core vesicles (LDCVs), whereas VMaT 2 is needed for the loading of small synaptic vesicles (SSVs).

In rat VMaT 1 is expressed in the adrenal gland, while VMaT 2 is expressed in brain.

Selected General References

Differential expression of vesicular monoamine transporter (VMAT) 1 and 2 in gastrointestinal endocrine tumours. Jakobsen AM, Andersson P, Saglik G, Andersson E, Kölby L, Erickson JD, Forssell-Aronsson E, Wängberg B, Ahlman H, Nilsson O. The Journal of pathology (2001) 195(4): 463-72.

VMAT-Mediated changes in quantal size and vesicular volume. Colliver TL, Pyott SJ, Achalabun M, Ewing AG. The Journal of neuroscience : the official journal of the Society for Neuroscience (2000) 20(14): 5276-82.

The neuronal monoamine transporter VMAT2 is regulated by the trimeric GTPase Go(2). Höltje M, von Jagow B, Pahner I, Lautenschlager M, Hörtnagl H, Nürnberg B, Jahn R, Ahnert-Hilger G. The Journal of neuroscience : the official journal of the Society for Neuroscience (2000) 20(6): 2131-41.

Vesicular monoamine transporter-2: immunogold localization in striatal axons and terminals. Nirenberg MJ, Chan J, Liu Y, Edwards RH, Pickel VM. Synapse (New York, N.Y.) (1997) 26(2): 194-8.

The vesicular monoamine transporter 2 is present in small synaptic vesicles and preferentially localizes to large dense core vesicles in rat solitary tract nuclei.

Nirenberg MJ, Liu Y, Peter D, Edwards RH, Pickel VM. Proceedings of the National Academy of Sciences of the United States of America (1995) 92(19): 8773-7.

Preferential localization of a vesicular monoamine transporter to dense core vesicles in PC12 cells. Liu Y, Schweitzer ES, Nirenberg MJ, Pickel VM, Evans CJ, Edwards RH. The Journal of cell biology (1994) 127(5): 1419-33.