

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VMAT2 in ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 899327
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human VMAT2 Met1-Asp514 Accession # Q05940
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	HEK293 human embryonic kidney cell line transfected with human VMAT2 and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

The Vesicular Monoamine Transporter 2 (VMAT2), also known as VAT2 and SCL18A, is a 55-75 kDa member of the vesicular transporter family, a major facilitator superfamily. VMAT2 is a 12 transmembrane (TM) glycoprotein that is found in the membrane of brain neurosecretory vesicles. It transports monoamines (dopamine, serotonin, and particularly histamine) from the cytosol into secretion vesicles by exchanging two H⁺ ions for one molecule of amine. Human VMAT2 is 514 amino acids (aa) in length. It contains two cytoplasmic domains, a 20 aa and a 52 aa N- and C-terminal respectively, plus an extended 88 aa luminal loop between aa 42-129. There is one luminal, intrachain disulfide bond that contributes to amine transport (C126-C333). In addition, residues in TM domains 5-8 (aa 220-352) and 9-12 (aa 358-462) also contribute to high affinity ligand interaction. VMAT2 is constitutively phosphorylated by CKII on S511 and S513. Within the cytoplasmic C-terminus, human VMAT2 is 94% aa identical to rat VMAT2.

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