

#### DESCRIPTION

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|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects human VMAT2 in ELISAs and Western blots.   |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 899327   |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant   |
| <b>Immunogen</b>          | NS0 mouse myeloma cell line transfected with human VMAT2<br>Met1-Asp514<br>Accession # Q05940  |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm  |
| <b>Formulation</b>        | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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.

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

#### PREPARATION AND STORAGE

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

#### 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<sup>+</sup> 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.

#### PRODUCT SPECIFIC NOTICES

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