

## DESCRIPTION

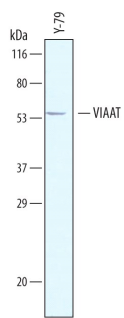
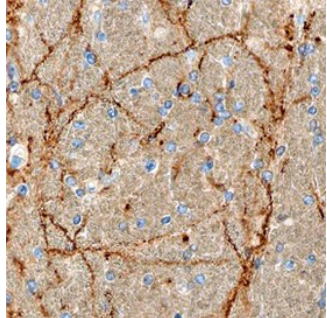
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human VIAAT/SLC32A1 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human VIAAT/SLC32A1 Ala2-Phe133 Accession # Q9H598
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human VIAAT/SLC32A1 by Western Blot.</b> Western blot shows lysates of Y-79 human retinoblastoma cell line. PVDF membrane was probed with 2 µg/mL of Sheep Anti-Human VIAAT/SLC32A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6847) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for VIAAT/SLC32A1 at approximately 57 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 8</i>.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>VIAAT/SLC32A1 in Human Brain.</b> VIAAT/SLC32A1 was detected in immersion fixed paraffin-embedded sections of human brain (caudate putamen) using Sheep Anti-Human VIAAT/SLC32A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6847) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal processes. View our protocol for <i>Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</i>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

VIAAT (Vesicular inhibitory amino acid transporter; also VGAT and SLC32A1) is a 56-58 kDa member of the amino acid/polyamine transporter 2 family of proteins. It is expressed in inhibitory neurons throughout the CNS, in both resting and activated lymphocytes, and in pancreatic α-cells (in rodent). VIAAT is believed to transport both GABA and glycine across synaptic vesicle membranes in an electrical and pH gradient-dependent manner. Once transported, these neurotransmitters are released at the presynaptic membrane, acting as inhibitory factors in the mature nervous system, and excitatory factors in the immature nervous system. Human VIAAT is a 525 amino acid (aa) 10-transmembrane nonglycosylated protein. The N-terminus (aa 1-133) and C-terminus (aa 511-525) are cytoplasmic. There is a 52 kDa short form that is not well characterized. Over aa 2-133, human VIAAT shares 95% aa identity with mouse VIAAT.