

**VGLUT2 (aa521-534) Antibody (internal region)**  
Peptide-affinity purified goat antibody  
Catalog # AF3993a**Specification****VGLUT2 (aa521-534) Antibody (internal region) - Product Information**

Application	WB
Primary Accession	<a href="#">O9P2U8</a>
Other Accession	<a href="#">NP_065079.1</a> , <a href="#">57084</a> , <a href="#">140919 (mouse)</a> , <a href="#">84487 (rat)</a>
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	64392

**VGLUT2 (aa521-534) Antibody (internal region) - Additional Information**

Gene ID 57084

**Other Names**

Vesicular glutamate transporter 2, VGLuT2, Differentiation-associated BNPI, Differentiation-associated Na(+)-dependent inorganic phosphate cotransporter, Solute carrier family 17 member 6, SLC17A6, DNPI, VGLUT2

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

VGLUT2 (aa521-534) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**VGLUT2 (aa521-534) Antibody (internal region) - Protein Information**

Name SLC17A6 ([HGNC:16703](#))

**Function**

Multifunctional transporter that transports L-glutamate as well as multiple ions such as chloride, proton, potassium, sodium and phosphate (PubMed:<a href="http://www.uniprot.org/citations/11698620" target="\_blank">11698620</a>, PubMed:<a href="http://www.uniprot.org/citations/33440152" target="\_blank">33440152</a>). At the

synaptic vesicle membrane, mainly functions as a uniporter which transports preferentially L-glutamate but also, phosphate from the cytoplasm into synaptic vesicles at presynaptic nerve terminals of excitatory neural cells (PubMed:<a href="http://www.uniprot.org/citations/11698620" target="\_blank">11698620</a>). The L-glutamate or phosphate uniporter activity is electrogenic and is driven by the proton electrochemical gradient, mainly by the electrical gradient established by the vacuolar H(+)-ATPase across the synaptic vesicle membrane (PubMed:<a href="http://www.uniprot.org/citations/11698620" target="\_blank">11698620</a>). In addition, functions as a chloride channel that allows the chloride permeation through the synaptic vesicle membrane therefore affects the proton electrochemical gradient and promotes synaptic vesicles acidification (By similarity). Moreover, functions as a vesicular K(+)/H(+) antiport allowing to maintain the electrical gradient and to decrease chemical gradient and therefore sustain vesicular glutamate uptake (By similarity). The vesicular H(+)/H(+) antiport activity is electroneutral (By similarity). At the plasma membrane, following exocytosis, functions as a symporter of Na(+) and phosphate from the extracellular space to the cytoplasm allowing synaptic phosphate homeostasis regulation (Probable) (PubMed:<a href="http://www.uniprot.org/citations/10820226" target="\_blank">10820226</a>). The symporter activity is driven by an inside negative membrane potential and is electrogenic (Probable). Also involved in the regulation of retinal hyaloid vessel regression during postnatal development (By similarity). May also play a role in the endocrine glutamatergic system of other tissues such as pineal gland and pancreas (By similarity).

#### Cellular Location

Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Multi-pass membrane protein. Synapse, synaptosome {ECO:0000250|UniProtKB:Q8BLE7}. Cell membrane; Multi-pass membrane protein

#### Tissue Location

Predominantly expressed in adult brain (PubMed:10820226). Expressed in amygdala, caudate nucleus, cerebral cortex, frontal lobe, hippocampus, medulla, occipital lobe, putamen, spinal cord, substantia nigra, subthalamic nucleus, temporal lobe and thalamus (PubMed:10820226).

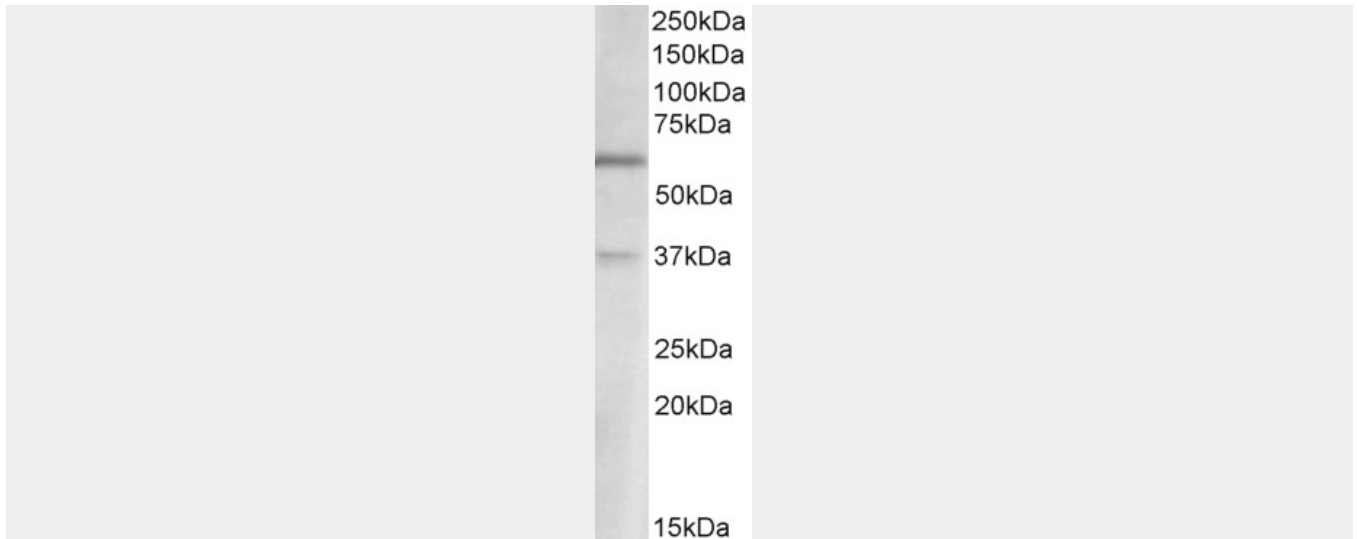
### VGLUT2 (aa521-534) Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### VGLUT2 (aa521-534) Antibody (internal region) - Images





AF3993a (2  $\mu$ g/ml) staining of Human Cerebellum lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

#### **VGLUT2 (aa521-534) Antibody (internal region) - References**

Glutamatergic and GABAergic innervation of human gonadotropin-releasing hormone-I neurons. Hrabovszky E, Molnár CS, Nagy R, Vida B, Borsay B, Rácz K, Herczeg L, Watanabe M, Kalló I, Liposits Z. *Endocrinology* 2012 Jun 153 (6): 2766-76. PMID: 22510271