

VGLUT1 Antibody
Rabbit mAb
Catalog # AP91700**Specification**

VGLUT1 Antibody - Product Information

Application	WB
Primary Accession	O9P2U7
Reactivity	Rat
Clonality	Monoclonal
Other Names	
BNPI; Slc17a7; VGluT1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	61613 Da

VGLUT1 Antibody - Additional Information

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human VGluT1
Description	Mediates the uptake of glutamate into synaptic vesicles at presynaptic nerve terminals of excitatory neural cells. May also mediate the transport of inorganic phosphate.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

VGLUT1 Antibody - Protein Information**Name** SLC17A7 ([HGNC:16704](#))**Function**

Multifunctional transporter that transports L-glutamate as well as multiple ions such as chloride, proton, potassium, sodium and phosphate (PubMed:10820226). 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 (By similarity). 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 (By similarity). In addition, functions as a chloride channel that allows a chloride permeation through the synaptic vesicle membrane that affects the proton electrochemical gradient and promotes

synaptic vesicles acidification (By similarity). Moreover, may function as a K(+)/H(+) antiport allowing to maintain the electrical gradient and to decrease chemical gradient and therefore sustain vesicular glutamate uptake (By similarity). The vesicular K(+)/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 (PubMed:10820226). The symporter activity is driven by an inside negative membrane potential and is electrogenic (By similarity). Is necessary for synaptic signaling of visual-evoked responses from photoreceptors (By similarity).

Cellular Location

Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q3TXX4}. Cell membrane; Multi-pass membrane protein. Synapse, synaptosome {ECO:0000250|UniProtKB:Q3TXX4}

Tissue Location

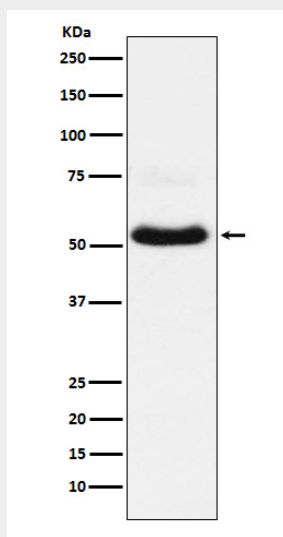
Expressed in several regions of the brain including amygdala, cerebellum, cerebral cortex, hippocampus, frontal lobe, medulla, occipital lobe, putamen and temporal lobe

VGLUT1 Antibody - 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](#)

VGLUT1 Antibody - Images



Western blot analysis of VGLUT1 expression in Neuro-2a cell lysate.