

Anti-VGLUT1 Rabbit Monoclonal Antibody

Catalog # ABO15274

Product Information

Application	WB
Primary Accession	Q9P2U7
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-VGLUT1 Rabbit Monoclonal Antibody . Tested in WB application. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	57030
Other Names	Vesicular glutamate transporter 1, Brain-specific Na(+)-dependent inorganic phosphate cotransporter, Solute carrier family 17 member 7, SLC17A7 (HGNC:16704)
Calculated MW	61613
Application Details	WB 1:500-1:2000
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 18S50
Immunogen	A synthesized peptide derived from human VGLuT1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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 an 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).

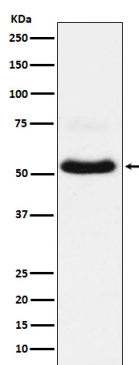
Cellular Location

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

Images



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

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