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Goat Anti-VGLUT1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF4557a

Product Information

Application	IHC, IF, Pep-ELISA
Primary Accession	Q9P2U7
Other Accession	NP_064705.1
Reactivity	Human, Mouse, Rat, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Clone Names	SLC17A7
Calculated MW	61613

Additional Information

Gene ID	57030
Other Names	SLC17A7, solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 7, BNPI, VGLUT1, brain-specific Na-dependent inorganic phosphate cotransporter, solute carrier family 17, member 7, vesicular glutamate transporter 1
Dilution	IHC~~1:100~500 IF~~1:50~200 Pep-ELISA~~N/A
Format	Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin.
Immunogen	Peptide with sequence C-HDQLAGSDDSEMED, from the internal region of the protein sequence according to NP_064705.1.
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	Goat Anti-VGLUT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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).

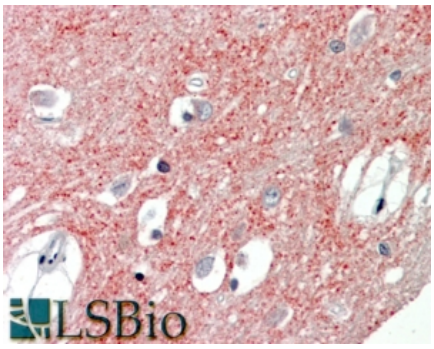
Cellular Location

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

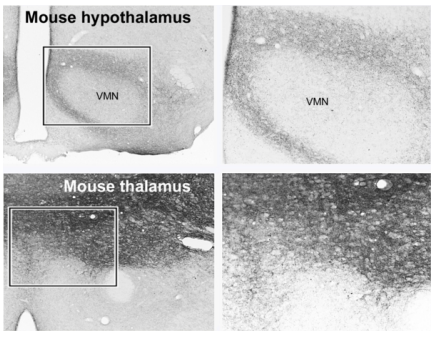
Tissue Location

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

Images

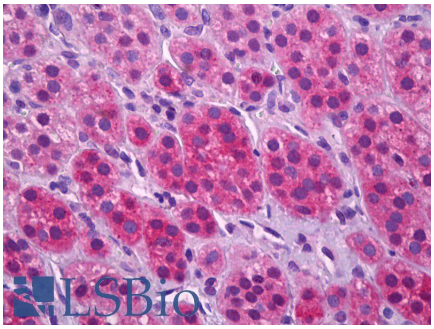


EB08600 (3.75µg/ml) staining of paraffin embedded Human Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB08600 (0.25µg/ml) staining of paraffin embedded Mouse Hypothalamus and Thalamus. Antigen retrieval at 80C for 30min with citrate buffer pH 6, HRP-staining (data kindly provided by Dr. E. Hrabovszky, Budapest, Hungary

EB08600 (3.75µg/ml) staining of paraffin embedded Human Adrenal Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.