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SLC17A6 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22344c

Product Information

Application	WB, FC, E
Primary Accession	Q9P2U8
Other Accession	A6QLI1, Q8BLE7, Q9JI12
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Human, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB57907
Calculated MW	64392

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
Target/Specificity	This SLC17A6 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 255-289 amino acids of human SLC17A6.
Dilution	WB~~1:2000 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SLC17A6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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:11698620, PubMed:33440152). 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:11698620). 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:11698620). 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:10820226). 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).

Background

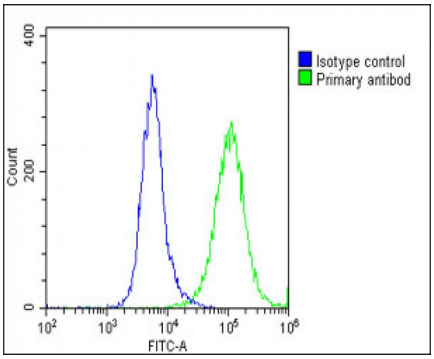
Mediates the uptake of glutamate into synaptic vesicles at presynaptic nerve terminals of excitatory neural cells. May also mediate the transport of inorganic phosphate.

References

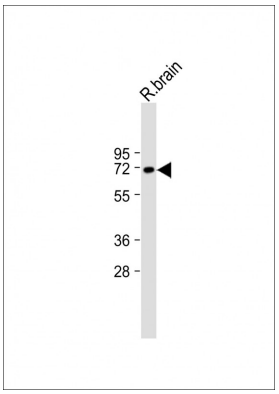
Aihara Y.,et al.J. Neurochem. 74:2622-2625(2000).
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Takamori S.,et al.J. Neurosci. 21:RC182-RC182(2001).
Sjoeblom T.,et al.Science 314:268-274(2006).

Images

Overlay histogram showing U-87 MG cells stained with AP22344c(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22344c, 1:25 dilution) for 60 min at 37ºC. The



secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-SLC17A6 Antibody (Center) at 1:2000 dilution + Rat brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 64 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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