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MOUSE VGLU2 Andibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP9300b

Specification

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Product Information

Primary Accession Q8BLE7

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Additional Information

Gene ID 140919

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
The synthetic peptide sequence used to generate the antibody <a >AP9300b was selected from the C-term region of human MOUSE VGLU2 Andibody (C-term). A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Protein Information

Name Slc17a6 {ECO:0000312|MGI:MGI:2156052}

Synonyms Dnpi, Vglut2

Function
Multifunctional transporter that transports L-glutamate as well as multiple ions such as chloride, proton, potassium, sodium and phosphate (PubMed:11432869, PubMed:17108179, PubMed:25433636, 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:<a href="http://www.uniprot.org/citations/11432869"

target="_blank">11432869, PubMed:17108179). 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:11432869). In addition, functions as a chloride channel that allows a 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 (PubMed:25433636). The vesicular H(+)/H(+) antiport activity is electroneutral (PubMed:25433636). 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:33440152). The symporter activity is driven by an inside negative membrane potential and is electrogenic (PubMed:33440152). Also involved in the regulation of retinal hyaloid vessel regression during postnatal development (PubMed:30936473). 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. Cell membrane; Multi-pass membrane protein

Tissue Location
Expressed in brain. Expressed in hippocampal neurons (at protein level).

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Images

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - Background

MOUSE VGLU2 mediates the uptake of glutamate into synaptic vesicles at presynaptic nerve terminals of excitatory neural cells. This protein may also mediate the transport of inorganic phosphate.

MOUSE VGLU2 Andibody (C-term) Blocking Peptide - References

Birgner,C., et.al, Proc. Natl. Acad. Sci. U.S.A. 107 (1), 389-394 (2010)Renier,N., et.al, PLoS Biol. 8 (3), E1000325 (2010)Rose,M.F., et.al, Proc. Natl. Acad. Sci. U.S.A. 106 (52), 22462-22467 (2009)