Datasheet for ABIN7043684

anti-SLC17A7 antibody (Cytosolic)

2 Images

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Overview

Quantity:	25 µL
Target:	SLC17A7
Binding Specificity:	AA 2-14, Cytosolic
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SLC17A7 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Vesicular Glutamate Transporter 1
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EFRQEEFRKLAGR, corresponding to amino acid residues 2-14 of rat VGLUT1
Isotype:	IgG
Specificity:	Cytoplasmic, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse,human - identical
Characteristics:	Anti-VGLUT1 Antibody (ABIN7043684, ABIN7044368 and ABIN7044369) is a highly specific antibody directed against an epitope of rat Vesicular glutamate transporter 1. The antibody can

Product Details

	be used in western blot and immunohistochemistry applications. It has been designed to recognize VGLUT1 from rat, mouse, and human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	SLC17A7
Alternative Name:	SLC17A7 (SLC17A7 Products)
Background:	Vesicular glutamate transporter 1, Brain-specific Na+-dependent inorganic phosphate cotransporter, BNPI, SLC17A7,Glutamate is the major excitatory neurotransmitter in the mammalian central nervous system (CNS) and is responsible for most of the fast synaptic neurotransmission. Glutamate has great contribution for learning, memory, and neuronal plasticity. Dysregulation of glutamate transmission plays a role in the pathophysiology of several psychiatric and neurological diseases1. Three vesicular glutamate transporters (VGLUT1, VGLUT2, and VGLUT3) have been identified. They are responsible for packaging and transporting glutamate into synaptic vesicles. VGLUTs in part regulate the storage and release of glutamate in excitatory circuits in the brain.All three VGLUT isoforms are highly conserved and have the same predicted topology including 12 putative transmembrane domains. They all share a conserved dileucine-like motif in the C terminus. This motif was found to be important for VGLUT1 endocytosis. In addition, VGLUT1 contains two polyproline domains distal to the C-terminal dileucine-like motif, including one that interacts with the endocytic BAR (Bin/Amphiphysin/Rvs) domain protein endophilin. Two additional dileucine-like motifs are present in the N terminus of VGLUT1 that are not well conserved in the other isoforms1-3. VGLUT1 is expressed in the hippocampus, cerebral cortex, and cerebellar cortex and appears to be the main isoform expressed in the cortex. The transporter is also detected in the enteric nervous system and pancreatic tissue. VGLUT1 has been suggested to influence the properties of the release of glutamate1,2. Alternative names: VGLUT1, Vesicular glutamate transporter 1, Brain-specific Na+-dependent inorganic phosphate cotransporter, BNPI, SLC17A7
Gene ID:	116638
NCBI Accession:	NM_020309
UniProt:	Q62634

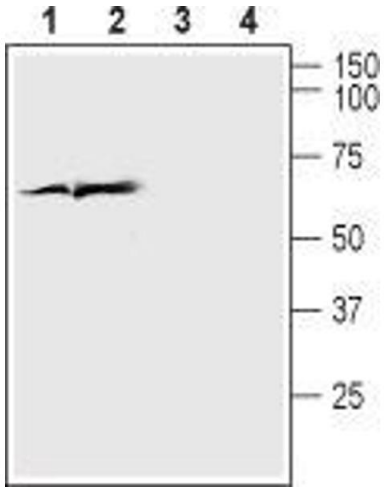
Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:400 Application Dilutions Western blot wb: 1:200
Comment:	Negative Control: (ABIN7236963) Blocking Peptide: (ABIN7236963)
Restrictions:	For Research Use only

Handling

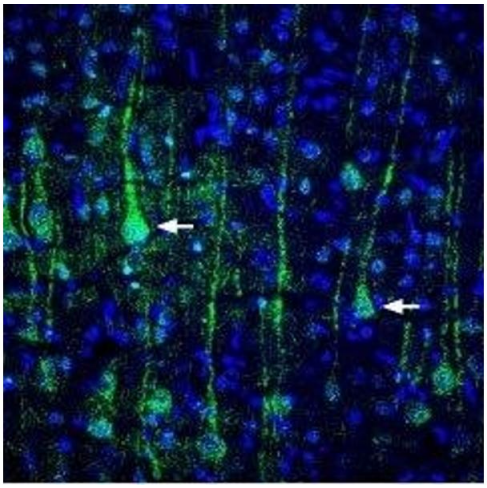
Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Western Blotting

Image 1. Western blot analysis of rat cortex lysate (lanes 1 and 3) and mouse brain lysate (lanes 2 and 4): - 1,2. Anti-VGLUT1 Antibody (ABIN7043684, ABIN7044368 and ABIN7044369), (1:200).3,4. Anti-VGLUT1 Antibody, preincubated with VGLUT1 Blocking Peptide (#BLP-GC035).



Immunohistochemistry

Image 2. Expression of VGLUT1 in rat cortex - Immunohistochemical staining of perfusion-fixed rat brain frozen sections using Anti-VGLUT1 Antibody (ABIN7043684, ABIN7044368 and ABIN7044369), (1:400), followed by goat-anti-rabbit-Alexa-488. VGLUT1 staining (green) appears in neurons of the pyramidal layer of the parietal cortex (arrows). DAPI is used as the nuclear counterstain (blue).

