Datasheet for ABIN7043683

anti-Solute Carrier Family 17 (Vesicular Glutamate Transporter), Member 6 (SLC17A6) (AA 45-56), (Cytosolic) antibody

Go to Product page

2 Images

Overview

Quantity:	0.2 mL
Target:	Solute Carrier Family 17 (Vesicular Glutamate Transporter), Member 6 (SLC17A6)
Binding Specificity:	AA 45-56, Cytosolic
Reactivity:	Rat
Host:	Guinea Pig
Clonality:	Polyclonal
Conjugate:	Un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Purpose:	A Guinea Pig Polyclonal Antibody to Vesicular Glutamate Transporter 2
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EDGKPLEVPEKK, corresponding to amino acid residues 45-56 of rat VGLUT2
Isotype:	IgG
Specificity:	Cytoplasmic, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse - identical, human - 11 out of 12 amino acid residues identical
Characteristics:	Guinea Pig Anti-VGLUT2 Antibody is a highly specific antibody directed against an epitope of rat

Product Details

	Vesicular glutamate transporter 2. The antibody can be used in western blot analysis and immunohistochemistry applications. It has been designed to recognize VGLUT2 from rat, mouse and human samples. \nThe antigen used to immunize guinea pigs is the same as Anti-VGLUT2 Antibody (ABIN7043681, ABIN7044370 and ABIN7044371) raised in rabbit. Our line of guinea pig antibodies enables more flexibility with our products such as multiplex staining studies, immunoprecipitation and more.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	Solute Carrier Family 17 (Vesicular Glutamate Transporter), Member 6 (SLC17A6)
Alternative Name:	SLC17A6 (SLC17A6 Products)
Background:	Vesicular glutamate transporter 2, Differentiation-associated Na+-dependent inorganic phosphate cotransporter, DNPI, SLC17A6,Central nervous system neurons have traditionally been thought to express exclusively membrane transporters and/or vesicular transporters for their transmitter. Three vesicular glutamate transporters (VGLUTs) have been cloned: BNPI/VGLUT1 (a brain-specific sodium dependent inorganic phosphate (Pi) transporter), and its homologs DNPI/VGLUT2 (differentiation-associated sodium-dependent Pi transporter) and VGLUT31. These transporters mediate glutamate uptake inside presynaptic vesicles and are anatomical and functional markers of glutamatergic excitatory transmission2.BNPI/DNPI encodes a membrane protein with 6-8 putative transmembrane domains which exhibits weak similarities to a kidney Na+-dependent inorganic phosphate co-transporter3. The transporters use a membrane potential gradient set by the vesicular H+-ATPase for glutamate uptake4. VGLUT1-3 are very similar in structure and function, but are used by different neuronal populations. VGLUT1 and VGLUT2 are expressed by the cortical and subcortical neurons respectively. VGLUT3 is expressed by non-glutamatergic neurons5. VGLUT2 is expressed in the thalamus, brainstem, and deep cerebellar nuclei2. A Recent study has shown that targeted deletion of VGLUT2 in mice causes perinatal lethality and a 95 % reduction in evoked glutamatergic responses in thalamic neurons, although hippocampal synapses function normally. Behavioral analysis of heterozygous VGLUT2 mice showed discrete behavioral phenotypes that suggest a deficit in thalamic processing6. Alternative names: Vesicular glutamate transporter 2, Differentiation-associated Na+-dependent inorganic phosphate cotransporter, DNPI, SLC17A6
Gene ID:	84487

Target Details

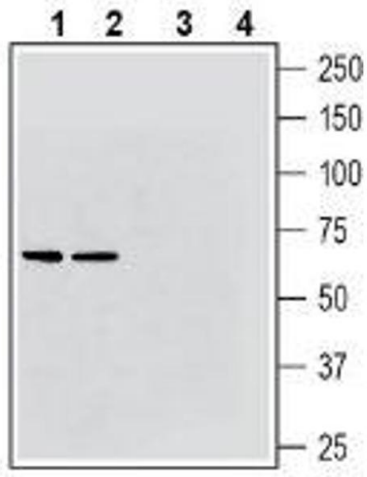
NCBI Accession:	NM_020346
UniProt:	Q9JI12

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:200 Application Dilutions Western blot wb: 1:200
Comment:	Cited Application: ICC Negative Control: (ABIN7236959) Blocking Peptide: (ABIN7236959)
Restrictions:	For Research Use only

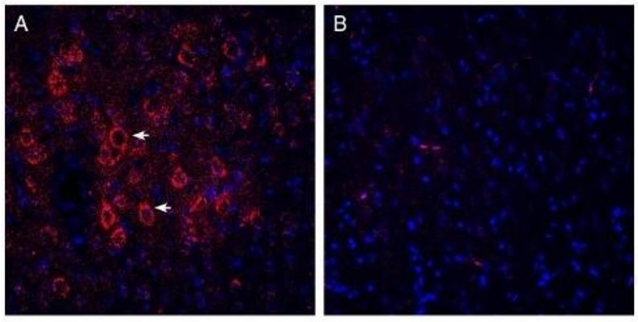
Handling

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).



Western Blotting

Image 1. Western blot analysis of rat brain membranes (lanes 1 and 3) and mouse brain membranes (lanes 2 and 4): - 1-2. Guinea Pig Anti-VGLUT2 Antibody (ABIN7043683, ABIN7045436 and ABIN7045437), (1:200). 3-4. Guinea Pig Anti-VGLUT2 Antibody, preincubated with VGLUT2 Blocking Peptide (BLP-GC036).



Immunohistochemistry

Image 2. Expression of VGLUT2 in rat parietal cortex. - Immunohistochemical staining of perfusion-fixed frozen rat brain sections with Guinea Pig Anti-VGLUT2 Antibody (ABIN7043683, ABIN7045436 and ABIN7045437), (1:200), followed by goat anti-Guinea Pig-AlexaFluor-594. A. VGLUT2 immunoreactivity (red) appears in pyramidal neuronal profiles (horizontal arrows). B. Pre-incubation of the antibody with VGLUT2 Blocking Peptide (BLP-GC036), suppressed staining. Cell nuclei are stained with DAPI (blue).