Datasheet for ABIN7043682

anti-Solute Carrier Family 17 (Vesicular Glutamate Transporter), Member 6 (SLC17A6) (AA 45-56), (Cytosolic) antibody (Atto 594)

Go to Product page

2 Images

Overview

Quantity:	50 µL
Target:	Solute Carrier Family 17 (Vesicular Glutamate Transporter), Member 6 (SLC17A6)
Binding Specificity:	AA 45-56, Cytosolic
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	Atto 594
Application:	Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Vesicular Glutamate Transporter 2 Conjugated to the Fluorescent Dye ATTO-594
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 - 11,12 amino acid residues identical

Product Details

Characteristics:	Anti-VGLUT2 Antibody (ABIN7043681, ABIN7044370 and ABIN7044371) is a highly specific antibody directed against an epitope of rat 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. \nAnti-VGLUT2-ATTO Fluor-594 Antibody (ABIN7043682) is directly labeled with an fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. The fluorescent label belongs to the class of Rhodamine dyes and can be used with fluorescent equipment typically optimized to detect Texas Red and Alexa-594. Anti-VGLUT2-ATTO Fluor-594 Antibody has been tested in immunohistochemical applications and is especially suited for experiments requiring simultaneous labeling of different markers.
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

Target Details

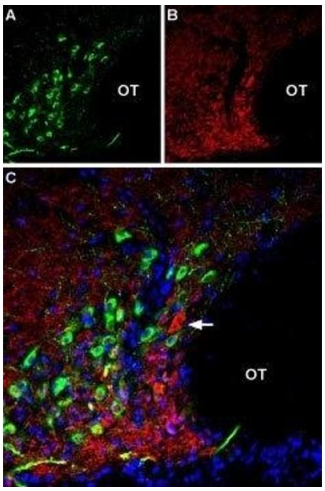
	phenotypes that suggest a deficit in thalamic processing6. Alternative names: VGLUT2, Vesicular glutamate transporter 2, Differentiation-associated Na+-dependent inorganic phosphate cotransporter, DNPI, SLC17A6
Gene ID:	84487
NCBI Accession:	NM_020346
UniProt:	Q9JI12

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:60 Application Dilutions Western blot wb: N/A
Comment:	Negative Control: (ABIN7236959) Blocking Peptide: (ABIN7236959)
Restrictions:	For Research Use only

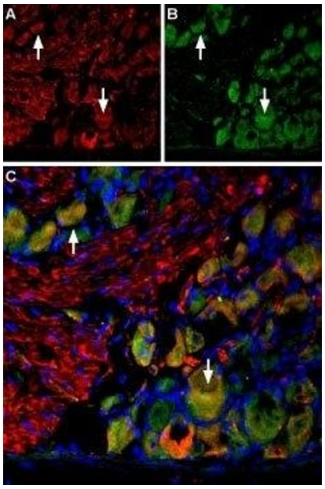
Handling

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, 1 % BSA with 0.05 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
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, protected from the light, 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).



Immunohistochemistry

Image 1. Multiplex staining of AT2 Receptor and VGLUT2 in rat supraoptic hypothalamic nucleus - Immunohistochemical staining of perfusion-fixed frozen rat brain sections using Anti-Angiotensin II Receptor Type-2 (extracellular)-ATTO Fluor-488 Antibody (ABIN7042926), (1:60) and Anti-VGLUT2-ATTO Fluor-594 Antibody (ABIN7043682), (1:60). A. AT2 receptor staining (green). B. VGLUT2 staining (red). C. Merge of the two images shows a general lack of co-localization of AT2 and VGLUT2 in this part of the hypothalamus (arrow). Cell nuclei are stained with DAPI (blue).



Immunohistochemistry

Image 2. Multiplex staining of VGLUT2 and Neurokinin 1 Receptor in rat DRG - Immunohistochemical staining of perfusion-fixed frozen rat dorsal root ganglion (DRG) sections using Anti-VGLUT2-ATTO Fluor-594 Antibody (ABIN7043682), (1:60) and Anti-Neurokinin 1 Receptor (NK1R) (extracellular)-ATTO Fluor-488 Antibody (ABIN7043804), (1:60). A. VGLUT2 staining (red). B. NK1 receptor staining (green). C. Merge of the two images demonstrates co-localization in some neuronal bodies (arrows point at examples). Cell nuclei are stained with DAPI (blue).