

Mouse VGLUT1 Monoclonal Antibody | anti-Slc17a7 antibody

VGLUT1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA102850	Mouse	Human, Mouse, Rat	Western Blot, Immunohistochemistry

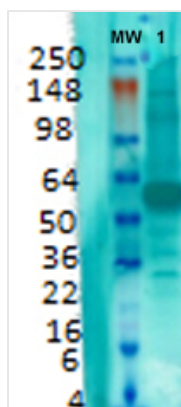
PRODUCT SYNONYMS

VGLUT1; Monoclonal Antibody; VGLUT1 Antibody; BNPI; SLC17A1; SLC17A1/VGLUT1; Solute Carrier family 17 member 7; Vesicular glutamate transporter 1; VGLUT 1; Brain-specific Na(+)-dependent inorganic phosphate cotransporter; anti-Slc17a7 antibody

PRODUCT SPECIFICATIONS

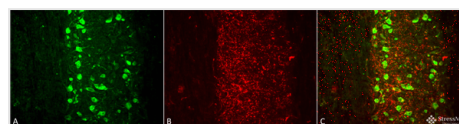
Host	Mouse
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG1
Clone Number	S28-9
Form/Format	Protein G Purified
Concentration	1mg/mL (varies by lot)
Sequence Length	560
Applicable Applications for anti-Slc17a7 antibody	WB (Western Blot), IHC (Immunohistochemistry)
Certificate of Analysis	1ug/mL was sufficient for detection of VGLut1 in 20ug of rat brain lysate by colorimetric immunoblot analysis using goat anti-mouse IgG:HRP as the secondary antibody.
Storage Buffer	PBS pH7.4, 50% glycerol, 0.09% sodium azide.
Preparation and Storage	-20 degree C

IMAGES



WB (Western Blot)

Western Blot analysis of Rat brain membrane lysate showing detection of VGLUT1 protein using Mouse Anti-VGLUT1 Monoclonal Antibody, Clone S28-9. Primary Antibody: Mouse Anti-VGLUT1 Monoclonal Antibody at 1:1000.



IHC (Immunohistochemistry)

Immunohistochemistry analysis using Mouse Anti-VGLUT1 Monoclonal Antibody, Clone S28-9. Tissue: spinal cord. Species: Mouse. Fixation: 4% PFA. Primary Antibody: Mouse Anti-VGLUT1 Monoclonal Antibody at 1:500 for 16 hours at RT. Secondary Antibody: Alexa Fluor 555 Donkey Anti-Mouse (red) at 1:2000 for 2 hours at RT. Counterstain: NeuN neuronal stain (green). Magnification: 20X. Courtesy of: Leilei Wang, Ph.D. UT Southwestern Medical Center at Dallas.

ADDITIONAL INFORMATION

Related Product Information for anti-Slc17a7 antibody	Background Info: Detects ~52kDa. No cross-reactivity against VGLUT2. Scientific Background: VGLUT1 is expressed in a subset of glutamate neurons and transports glutamate into native synaptic vesicles from the brain, exhibiting a conductance for chloride that is blocked by glutamate (1). Vesicular glutamate transport has a substantially lower apparent affinity than the plasma membrane excitatory amino acid transporters. Glutamate transport by VGLUT1 is saturated with a K(m) of approximately 2 mM, in the same range as transport by synaptic vesicles. Finally, plasma membrane glutamate transporters recognize both aspartate and glutamate as substrates, whereas VGLUT1 does not recognize aspartate (2).
Product Categories/Family for anti-Slc17a7 antibody	Transporters
References	1. Wojcik S.M., et al. (2004) PNAS. 101(18): 7158-7163. 2. Shigeri Y., Seal R.P., Shimamoto K. (2004) Brain Res Rev. 45(3): 250-265.

NCBI AND UNIPROT INFORMATION

NCBI GI #	16758726
NCBI GeneID	116638
NCBI Accession #	NP_446311.1
NCBI GenBank Nucleotide #	NM_053859.2
UniProt Accession #	Q62634; A9LRT0
Molecular Weight	64,333 Da
NCBI Official Full Name	vesicular glutamate transporter 1
NCBI Official Synonym Full Names	solute carrier family 17 (vesicular glutamate transporter), member 7
NCBI Official Symbol	Slc17a7
NCBI Official Synonym Symbols	BNPI; Vglut1
NCBI Protein Information	vesicular glutamate transporter 1; solute carrier family 17 member 7; brain-specific Na-dependent inorganic phosphate cotransporter; brain-specific Na(+)-dependent inorganic phosphate cotransporter; solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 7
UniProt Protein Name	Vesicular glutamate transporter 1
UniProt Gene Name	Slc17a7
UniProt Synonym Gene Names	Bnpi; Vglut1; VGLUT1
UniProt Entry Name	VGLU1_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.