



# SZABO SCANDIC

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## Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Anti-VGLUT1 Antibody [S28-9]

Mouse Anti-Rat VGLUT1 Monoclonal IgG1  
Catalog No. SMC-394



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

VGLUT1 Antibody

### Description

Mouse Anti-Rat VGLUT1 Monoclonal IgG1

### Species Reactivity

Human, Mouse, Rat

### Applications

WB, IHC

### Antibody Dilution

WB (1:1000); optimal dilutions for assays should be determined by the user.

### Host Species

Mouse

### Immunogen Species

Rat

### Immunogen

Fusion protein amino acids 493-560 (cytoplasmic C-terminus) of rat VGlut1

### Concentration

1 mg/ml

### Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

## Properties

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### Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Protein G Purified

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**Clonality**

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Monoclonal

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**Clone Number**

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S28-9

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**Isotype**

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IgG1

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**Specificity**

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Detects ~52kDa. No cross-reactivity against VGLut2.

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**Cite This Product**

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Mouse Anti-Rat VGLUT1 Monoclonal, Clone S28-9 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-394)

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**Certificate Of Analysis**

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1 µg/ml of SMC-394 was sufficient for detection of VGLut1 in 20 µg of rat brain lysate by colorimetric immunoblot analysis using goat anti-mouse IgG:HRP as the secondary antibody.

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**Biological Description**

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**Alternative Names**

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

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**Research Areas**

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Cell Signaling, Cell Structure, Neuroscience, Neurotransmitter Transporters, Pre-Synaptic Markers, Pumps/Transporters

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**Cellular Localization**

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Cell Junction, Cytoplasmic Vesicle, Membrane, Secretory vesicle, Synapse, Synaptic vesicle membrane

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**Accession Number**

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NP\_446311.1

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**Gene ID**

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116638

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**Swiss Prot**

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Q62634

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**Scientific Background**

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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).

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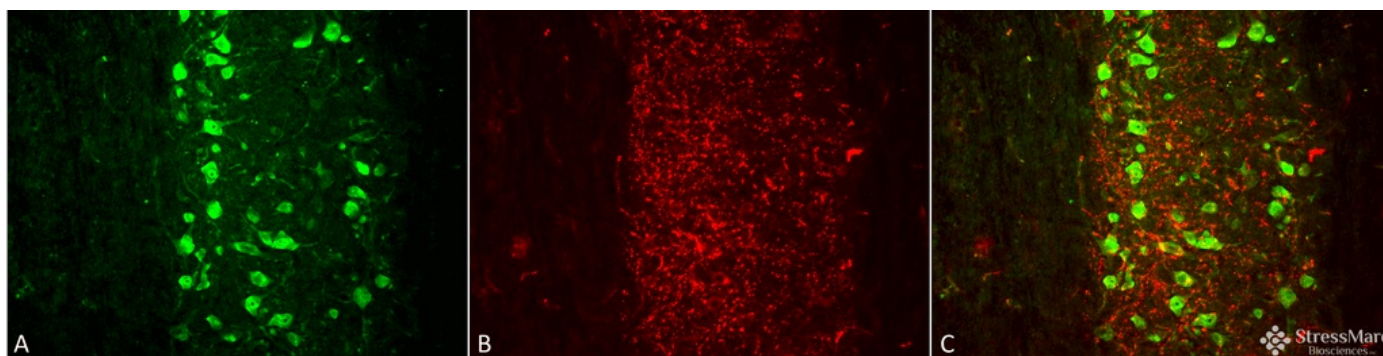
**References**

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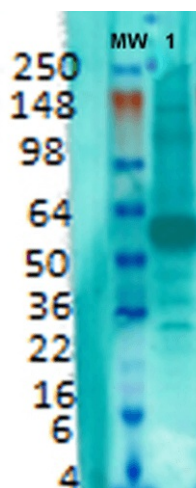
1. Wojcik S.M., et al. (2004) PNAS. 101(18): 7158-7163.
  2. Shigeri Y., Seal R.P., Shimamoto K. (2004) Brain Res Rev. 45(3): 250-265.
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## Product Images

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Immunohistochemistry analysis using Mouse Anti-VGLUT1 Monoclonal Antibody, Clone S28-9 (SMC-394). Tissue: spinal cord. Species: Mouse. Fixation: 4% PFA. Primary Antibody: Mouse Anti-VGLUT1 Monoclonal Antibody (SMC-394) 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.



Western Blot analysis of Rat brain membrane lysate showing detection of VGLUT1 protein using Mouse Anti-VGLUT1 Monoclonal Antibody, Clone S28-9 (SMC-394). Primary Antibody: Mouse Anti-VGLUT1 Monoclonal Antibody (SMC-394) at 1:1000.

## Product Citations (1)

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### Immunohistochemistry

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**Feedback modulation of neural network synchrony and seizure susceptibility by Mdm2-p53-Nedd4-2 signaling.**

Jewett, K.A. et al. -2016 Mol Brain. 9(1):32.

**PubMed ID:** 27000207 **Reactivity:** Mouse **Applications:** Immunohistochemistry

### Reviews

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Based on validation through cited publications.



**StressMarq Biosciences**

June 14, 2016: