

FUJIFILM**Wako**Code No. 013-28811 (50 μ L)**Anti VGLUT1, Guinea Pig
抗 VGLUT1, モルモット****[Background]**

Vesicular glutamate transporters (VGLUTs) are involved in the transport of glutamate, a major excitatory neurotransmitter, into synaptic vesicles¹⁾. The release of glutamate upon neural excitation is known to be involved in various physiological phenomena such as cognitive function and memory.

VGLUT1 is mainly expressed in the cerebral cortex and hippocampus of the central nervous system and is used as a specific marker of glutamatergic neurons for the identification of excitatory neurons²⁾.

Anti VGLUT1, Guinea Pig is a guinea pig polyclonal antibody that reacts with VGLUT1.

[Description]

[Reactivity]	Reacts with VGLUT1
[Antigen]	Recombinant rat VGLUT1
[Species cross reactivity]	Mouse and rat (Other species have not been tested)
[Host]	Guinea pig
[Isotype]	— (Polyclonal)
[Formulation]	Antiserum diluted in PBS

[Application]

Immunohistochemistry (frozen section) 1 : 1,600
Optimal concentration should be determined by each laboratory for each application.

[Storage]

Store at -20°C.
Avoid repeated freeze and thaw.

[Package]

50 μ L

[Protocol examples (Immunohistochemistry, frozen brain section)]

1. Perfusion fixation
Perfuse with sodium citrate/PBS to remove blood, followed by perfusion with 4% PFA.
2. Post-fixation
4% PFA (~ 24 hours)
3. Immersion in sucrose
30% Sucrose/PBS (4°C, overnight ~ approximately 2 days)
4. Preparation of frozen sections
After removing sucrose, prepare frozen blocks and cut 30- μ m thick sections using a cryostat.

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5. Glycine treatment
25 mM glycine/PBS (approximately 20 minutes)
6. Blocking
5% normal goat serum in 0.3% Triton X-100/PBS (4°C, overnight)
7. Primary antibody reaction
Anti VGLUT1, Guinea pig (1 : 1,600), 1% normal goat serum in 0.3% Triton X-100/PBS (4°C, overnight ~ 2 days).
8. Washing
0.3% TritonX-100/PBS (5 minutes \times 3)
9. Secondary antibody reaction
Alexa Fluor[®] 488 AffiniPure Goat Anti-Guinea Pig IgG (H+L) (1 : 500), 1% normal goat serum in 0.3% Triton X-100/PBS (RT, 2 hours)
10. Washing
0.3% TritonX-100/PBS (5 minutes \times 3)
11. Mounting
The sample is sealed in mounting medium and stored at 4°C in a dark place.

[References]

- 1) Martineau, M., Guzman, R. E., Fahlke, C., Klingau, J. : *Nat. Commun.*, **8**, 2279 (2017)
- 2) Taguchi, K., Watanabe, Y., Tsujimura, A., Tatebe, H., Miyata, S., Tokuda, T., Mizuno, T., Tanaka, M. : *PLoS One*, **9**, e89327 (2014)

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