

VGLUT 1

Cat.No. 135-0P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 542 to 560 from rat VGLUT1 (UniProt Id: Q62634)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	135 011, 135 316
Remarks	This control peptide consists of the synthetic peptide (aa 542-560) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The vesicular glutamate transporter 1 **VGLUT 1**, also referred to as **BNPI** and **SLC17A7**, was originally identified as a brain specific phosphate transporter. Like the related VGLUT 2, VGLUT 1 is both necessary and sufficient for uptake and storage of glutamate and thus comprises the sole determinant for a glutamatergic phenotype. Both VGLUTs are different from the plasma membrane transporters in that they are driven by a proton electrochemical gradient across the vesicle membrane.

VGLUT 1 and VGLUT 2 show complementary expression patterns. Together, they are currently the best markers for glutamatergic nerve terminals and glutamatergic synapses.

Selected General References

Identification of a vesicular glutamate transporter that defines a glutamatergic phenotype in neurons.
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Uptake of glutamate into synaptic vesicles by an inorganic phosphate transporter.
Bellocchio EE, Reimer RJ, Fremerey RT, Edwards RH
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The localization of the brain-specific inorganic phosphate transporter suggests a specific presynaptic role in glutamatergic transmission.

Bellocchio EE, Hu H, Pohorille A, Chan J, Pickel VM, Edwards RH
The Journal of neuroscience : the official journal of the Society for Neuroscience (1998) 18(21): 8648-59.

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