**Selected References SYSY Antibodies**

An essential role of acetylcholine-glutamate synergy at habenular synapses in nicotine dependence.
et al. (2015) e11396. WB, IHC.

Splice-specific roles of glycine receptor alpha3 in the hippocampus.

Cadherins mediate cocaine-induced synaptic plasticity and behavioral conditioning.

Soulard C, Salsac C, Mouzat K, Hilaire C, Roussel J, Mezghrani A, Lumbroso S, Raoul C, Scamps F
Cell reports (2020) 308: 2581-2593.e7.. IHC; tested species: mouse.

Microglial activation increases cocaine self-administration following adolescent nicotine exposure.

Inhibition of colony stimulating factor 1 receptor corrects maternal inflammation-induced microglial and synaptic dysfunction and behavioral abnormalities.
Molecular psychiatry (2020) :.. IHC; tested species: mouse.

Motoneuron deafferentation and gliosis occur in association with neuromuscular regressive changes during ageing in mice.

Uncoupling endosomal CLC chloride/proton exchange causes severe neurodegeneration.
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The Synaptic Vesicle Priming Protein CAPS1 Shapes the Adaptation of Sensory Evoked Responses in Mouse Visual Cortex.
Nestvogl DB, Merino RM, Leon-Pinzon C, Schottdorf MF, Lee C, Imig C, Brosn N, Rhee JS

The endogenous neuronal complement inhibitor SRPX2 protects against complement-mediated synapse elimination during development.
Cong Q, Soteros BM, Wollet M, Kim JH, Sia GM
Nature communications (2020) :.. IHC; tested species: mouse.

Synaptic organization and behaviour-dependent activity of mGluR8a-innervated GABAergic trilaminar cells projecting from the hippocampus to the subiculum.
Brain structure & function (2020) 2252: 705-734.. IHC; tested species: mouse, rat.

High-fat diet induces time-dependent synaptic plasticity of the lateral hypothalamus.
Linehan V, Fang LZ, Parsons MP, Hirotsawa M
Molecular metabolism (2020) : 100977.. IHC; tested species: rat.

Pathological changes of distal motor neurons after complete spinal cord injury.
Pathological changes of distal motor neurons after complete spinal cord injury.
Molecular psychiatry (2020) :.. IHC; tested species: mouse.

Turecek J, Regehr WG

The development of synaptic transmission is time-locked to early social behaviors in rats.
Naskar S, Narducci R, Balzani E, Cwetsch AW, Tucci V, Canciedda L

**VGLUT 2**

Cat.No. 135 404; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

**Data Sheet**

<table>
<thead>
<tr>
<th>Reconstitution/Storage</th>
<th>100 µl antiserum, lyophilized. For reconstitution add 100 µl H2O, then aliquot and store at -20°C until use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications WB: 1 : 1000 (AP staining) (see remarks)</td>
<td>IP: yes</td>
</tr>
<tr>
<td>ICC: 1 : 200 up to 1 : 500</td>
<td>HIC: 1 : 200 up to 1 : 500</td>
</tr>
<tr>
<td>IHC-P/PPFE: 1 : 500</td>
<td>EM: yes</td>
</tr>
<tr>
<td>Immunogen Recombinant protein corresponding to AA 510 to 582 from rat VGLUT2 (UniProt Id: Q9JI12)</td>
<td></td>
</tr>
<tr>
<td>Reactivity Reacts with: rat (Q9JI12), mouse (Q8BLE7). Other species not tested yet.</td>
<td></td>
</tr>
<tr>
<td>Specificity Specific for VGLUT 2. K.O. PubMed: 25357191</td>
<td></td>
</tr>
<tr>
<td>Matching control 135-4P</td>
<td></td>
</tr>
<tr>
<td>Remarks This antibody is highly recommended as a marker for glutamatergic nerve terminals.</td>
<td></td>
</tr>
<tr>
<td>WB: VGLUT 2 aggregates after boiling, making it necessary to run SDS-PAGE with non-boiled samples.</td>
<td></td>
</tr>
</tbody>
</table>

**TO BE USED IN VITRO / FOR RESEARCH ONLY**

NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The vesicular glutamate transporter 2 VGLUT 2, also referred to as DNPI and SLC17A6, has a more restricted expression than the related VGLUT 1. Like VGLUT 1, it 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.