SYSY Antibodies

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SERT

Cat.No. 340 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 up to 1 : 5000 (fluorescent detection) **IP**: yes **ICC**: 1 : 500 **IHC**: 1 : 500 up to 1 : 1000 **IHC-P (FFPE)**: 1 : 200 up to 1 : 500
Immunogen	Recombinant protein corresponding to the amino terminal part of mouse SERT (UniProt Id: Q60857)
Reactivity	Reacts with: rat (P31652), mouse (Q60857). Other species not tested yet.
Specificity	K.O. validated PubMed: 28362488

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

Background

This **ser**otonin **t**ransporter (**SERT**), also referred to as 5HTT and Slc6a4, is a monoamine transporter protein that transports serotonin back from the synaptic cleft into the presynaptic neuron to terminate the action of this neurotransmitter.

Selected References for 340 003

Serotonin Transporter Associated Protein Complexes Are Enriched in Synaptic Vesicle Proteins and Proteins Involved in Energy Metabolism and Ion Homeostasis.
Haase J, Grudzinska-Goebel J, Müller HK, Münster-Wandowski A, Chow E, Wynne K, Farsi Z, Zander JF, Ahnert-Hilger G
ACS chemical neuroscience (2017) 85: 1101-1116. . **WB, EM; KO verified; tested species: mouse,rat**

The development of synaptic transmission is time-locked to early social behaviors in rats.
Naskar S, Narducci R, Balzani E, Cwetsch AW, Tucci V, Cancedda L
Nature communications (2019) 101: 1195. . **IHC; tested species: rat**

Neuropathic Pain-Like Responses in a Chronic CNS Injury Model Are Mediated by Corticospinal-Targeted Spinal Interneurons.
Guan X, Zhu Y, Zhong J, Hollis E
The Journal of neuroscience : the official journal of the Society for Neuroscience (2025) 4529: . . **IHC; tested species: mouse**

Fluoxetine reverses early-life stress-induced depressive-like behaviors and region-specific alterations of monoamine transporters in female mice.
Zheng JY, Li XX, Liu X, Zhang CC, Sun YX, Ma YN, Wang HL, Su YA, Si TM, Li JT
Pharmacology, biochemistry, and behavior (2024) 237: 173722. . **IHC; tested species: mouse**

INSIHGT: an accessible multi-scale, multi-modal 3D spatial biology platform.
Yau CN, Hung JTS, Campbell RAA, Wong TCY, Huang B, Wong BTY, Chow NKN, Zhang L, Tsoi EPL, Tan Y, Li JJX, et al.
Nature communications (2024) 151: 10888. . **IHC; tested species: mouse**

Sex and brain region-specific regulation of serotonin transporter activity in synaptosomes in guanine nucleotide-binding protein G(q) alpha knockout mice.
Haase J, Jones AKC, Mc Veigh CJ, Brown E, Clarke G, Ahnert-Hilger G
Journal of neurochemistry (2021) : . . **WB; tested species: mouse**

Enoxaparin promotes functional recovery after spinal cord injury by antagonizing PTPRσ.
Ito S, Ozaki T, Morozumi M, Imagama S, Kadomatsu K, Sakamoto K
Experimental neurology (2021) 340: 113679. . **IHC; tested species: rat**

TNFα-dependent anhedonia and upregulation of hippocampal serotonin transporter activity in a mouse model of collagen-induced arthritis.
Brown E, Mc Veigh CJ, Santos L, Gogarty M, Müller HK, Elfving B, Brayden DJ, Haase J
Neuropharmacology (2018) : . . **WB; tested species: mouse**

Altered dopamine release and monoamine transporters in Vps35 p.D620N knock-in mice.
Cataldi S, Follett J, Fox JD, Tatarnikov I, Kadgien C, Gustavsson EK, Khinda J, Milnerwood AJ, Farrer MJ
NPJ Parkinson's disease (2018) 4: 27. . **WB; tested species: mouse**

Selected General References

Axonal targeting of the serotonin transporter in cultured rat dorsal raphe neurons is specified by SEC24C-dependent export from the endoplasmic reticulum.
Montgomery TR et al. J. Neurosci. (2014) PubMed:24790205

Increased hippocampal CA1 density of serotonergic terminals in a triple transgenic mouse model of Alzheimer's disease: an ultrastructural study.
Noristani HN et al. Cell Death Dis (2011) PubMed:21918544

Serotonin transporter localization in the hamster suprachiasmatic nucleus.
Legutko R et al. Brain Res. (2001) PubMed:11222995

Access the online factsheet including applicable protocols at https://sysy.com/product/340003 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.