SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

CSP

Cat.No. 154 003; 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 : 10000 (AP staining) **IP**: yes **ICC**: 1 : 100 up to 1 : 1000 **IHC**: 1 : 500 **IHC-P (FFPE)**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 182 to 198 from rat CSP (UniProt Id: P60905)
Reactivity	Reacts with: rat (P60905), mouse (P60904), chicken. Other species not tested yet. Predicted to cross-react with human (Q9H3Z4), cow, dog due to high sequence homology.
Specificity	K.O. validated PubMed: 27881461

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

Background

Cysteine **S**tring **P**roteins **CSP**s are composed of an N-terminal J-domain and a central palmitoylated cysteine string. This post-translational modification shifts the molecular weight of CSP 1 in brain from 23 kDa to 34 kDa and confers membrane targeting of the protein.
CSP has been initially identified as a synaptic vesicle protein which is involved in Ca^{2+} triggered neurotransmitter release. Later CSP was also found on Large Dense Core Vesicles (LDCVs) of pancreatic insulin secretory β-cells, chromaffin cells and adipocytes. It has been shown to interact with SNARE proteins like VAMP 2, VAMP 7 and syntaxin 4.

Selected References for 154 003

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.
Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al.
Science (New York, N.Y.) (2014) 3446187: 1023-8. . **WB, ICC, IHC; tested species: mouse,rat**

LuTHy: a double-readout bioluminescence-based two-hybrid technology for quantitative mapping of protein-protein interactions in mammalian cells.
Trepte P, Kruse S, Kostova S, Hoffmann S, Buntru A, Tempelmeier A, Secker C, Diez L, Schulz A, Klockmeier K, Zenkner M, et al.
Molecular systems biology (2018) 147: e8071. . **WB, ICC; tested species: mouse**

Lysosomal dysfunction disrupts presynaptic maintenance and restoration of presynaptic function prevents neurodegeneration in lysosomal storage diseases.
Sambri I, D'Alessio R, Ezhova Y, Giuliano T, Sorrentino NC, Cacace V, De Risi M, Cataldi M, Annunziato L, De Leonibus E, Fraldi A, et al.
EMBO molecular medicine (2017) 91: 112-132. . **WB, ICC; KO verified; tested species: mouse**

Molecular dynamics of photoreceptor synapse formation in the developing chick retina.
Wahlin KJ, Moreira EF, Huang H, Yu N, Adler R
The Journal of comparative neurology (2008) 5065: 822-37. . **WB, IHC; tested species: chicken**

Assessment of Neurobehavioral Performance and Markers of Synaptic Vesicle Trafficking in an Alpha-Synuclein Knockout Mouse Model after Controlled Cortical Impact Injury.
Moschonas EH, Rohde Z, Parry M, Bhatia J, Fellman S, Pullen EC, Shah AR, Henchir J, Li Y, Dixon CE, Carlson SW, et al.
Neurotrauma reports (2025) 61: 854-863. . **IHC-P; tested species: mouse**

Central biogenic amine deficiency with concomitant exploratory behavioral deficits in Dnajc12 knock-out mice.
Deng IB, Follett J, Fox JD, Wall S, Farrer MJ
NPJ Parkinson's disease (2025) 111: 143. . **WB; tested species: mouse**

Gestational exposure to metformin programs improved glucose tolerance and insulin secretion in adult male mouse offspring.
Gregg BE, Botezatu N, Brill JD, Hafner H, Vadrevu S, Satin LS, Alejandro EU, Bernal-Mizrachi E
Scientific reports (2018) 81: 5745. . **WB; tested species: mouse**

Ubiquitin-Synaptobrevin Fusion Protein Causes Degeneration of Presynaptic Motor Terminals in Mice.
Liu Y, Li H, Sugiura Y, Han W, Gallardo G, Khvotchev M, Zhang Y, Kavalali ET, Südhof TC, Lin W
The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 3533: 11514-31. . **WB**

Selective coexpression of synaptic proteins, α-synuclein, cysteine string protein-α, synaptophysin, synaptotagmin-1, and synaptobrevin-2 in vesicular acetylcholine transporter-immunoreactive axons in the guinea pig ileum.
Sharrad DF, Gai WP, Brookes SJ
The Journal of comparative neurology (2013) 52111: 2523-37. . **IHC**

α-Syn suppression reverses synaptic and memory defects in a mouse model of dementia with Lewy bodies.
Lim Y, Kehm VM, Lee EB, Soper JH, Li C, Trojanowski JQ, Lee VM
The Journal of neuroscience : the official journal of the Society for Neuroscience (2011) 3127: 10076-87. . **IHC**

Access the online factsheet including applicable protocols at https://sysy.com/product/154003 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.