SYSY Antibodies

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NeuN

Cat.No. 266 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 µl H_2O, then aliquot and store at -20°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**: not tested yet **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 100 up to 1 : 500 **IHC-P (FFPE)**: 1 : 200 up to 1 : 1000 **IHC-Fr**: yes **ExM**: external data (see remarks)
Immunogen	Recombinant protein corresponding to AA 1 to 97 from mouse NeuN (UniProt Id: Q8BIF2)
Reactivity	Reacts with: rat (D4A2H6), mouse (Q8BIF2), human (A6NFN3). Other species not tested yet.
Remarks	**ExM**: This antibody has been successfully applied and published for this method by customers (see application-specific references).

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

Background

NeuN (**Neu**ronal **N**uclei) is a neuron-specific nuclear protein that has been identified as Fox-3/Rbfox3, a member of the Fox-1 family of transcription factors.
NeuN is only expressed in the nuclei of differentiated neurons. In some neurons - Purkinje cells, sympathetic ganglion cells, INL retinal cells, Cajal-Retzius cells, inferior olivary, and dentate nucleus neurons - NeuN is not detectable.

For more information on protein expression pattern, please refer to the overview image in our SYSY Antibodies ATLAS.

Selected References for 266 004

Jionoside A1 alleviates ischemic stroke ischemia/reperfusion injury by promoting Nix-mediated mitophagy.
Yu X, Liu X, Mi X, Luo X, Lian Z, Tang J, Wang G
Cellular and molecular biology (Noisy-le-Grand, France) (2023) 698: 237-245. . **ICC, IHC; tested species: rat**

Characterizing and targeting glioblastoma neuron-tumor networks with retrograde tracing.
Tetzlaff SK, Reyhan E, Layer N, Bengtson CP, Heuer A, Schroers J, Faymonville AJ, Langeroudi AP, Drewa N, Keifert E, Wagner J, et al.
Cell (2024) : . . **ICC, IHC-P; tested species: human,mouse**

The kinase RIPK3 promotes neuronal survival by suppressing excitatory neurotransmission during central nervous system viral infection.
Estevez I, Buckley BD, Lindman M, Panzera N, Chou TW, McCourt M, Vaglio BJ, Atkins C, Firestein BL, Daniels BP
Immunity (2025) 583: 666-682.e6. . **IHC, ICC; tested species: mouse**

Neonatal brain injury unravels transcriptional and signaling changes underlying the reactivation of cortical progenitors.
Foucault L, Capeliez T, Angonin D, Lentini C, Bezin L, Heinrich C, Parras C, Donega V, Marcy G, Raineteau O
Cell reports (2024) 432: 113734. . **ICC, IHC; tested species: mouse**

Single-cell dissection of the human motor and prefrontal cortices in ALS and FTLD.
Pineda SS, Lee H, Ulloa-Navas MJ, Linville RM, Garcia FJ, Galani K, Engelberg-Cook E, Castanedes MC, Fitzwalter BE, Pregent LJ, Gardashli ME, et al.
Cell (2024) 1878: 1971-1989.e16. . **IHC_FR; tested species: mouse**

Comparative pathogenesis of different phylogroup I bat lyssaviruses in a standardized mouse model.
Klein A, Eggerbauer E, Potratz M, Zaeck LM, Calvelage S, Finke S, Müller T, Freuling CM
PLoS neglected tropical diseases (2022) 161: e0009845. . **CLARITY; tested species: mouse**

Remodeling synaptic connections via engineered neuron-astrocyte interactions.
Kim SH, Won W, Kim GH, Kook YH, Son S, Choi S, Kang DY, Park MG, Choi YJ, Won SS, Shin J, et al.
Nature communications (2026) 171: . . **IHC; tested species: mouse**

Haptoglobin and Hemopexin Redirect Heme-Driven Oxidative Stress and Neurotoxicity in Organotypic Brain Slices.
Stalder AT, Buzzi RM, Vallelian F, Schaer DJ
ACS chemical neuroscience (2026) 171: 77-89. . **IHC; tested species: mouse**

Protocol for the establishment and morphological characterization of long-term cultivated murine cerebral organoids.
El-Debs I, Knittler MR, Mettenleiter TC, Mason JO, Sehl-Ewert J
STAR protocols (2026) 71: 104324. . **ICC; tested species: mouse**

Ageing promotes microglial accumulation of slow-degrading synaptic proteins.
Guldner IH, Wagner VP, Moran-Losada P, Shi SM, Golub SW, Hevler JF, Chen K, Meese BT, Ghoochani A, Pulido E, Oh HS, et al.
Nature (2026) : . . **IHC; tested species: mouse**

Glutamatergic dysfunction of astrocytes in paraventricular nucleus of thalamus contributes to adult anxiety susceptibility in adolescent ethanol exposed mice.
Bennett A, Kim H, Thomas D, Biggs P, Ara R, Bosomtwi A, Kang S
Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology (2026) 514: 778-790. .
IHC; tested species: mouse

Access the online factsheet including applicable protocols at https://sysy.com/product/266004 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.