SYSY Antibodies

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SOX10

Cat.No. 347 404; 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**: 1 : 2000 up to 1 : 4000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 2000 **IHC-P (FFPE)**: 1 : 1000
Immunogen	Synthetic peptide corresponding to residues near the amino terminus of mouse SOX10 (UniProt Id: Q04888)
Reactivity	Reacts with: rat (O55170), mouse (Q04888), human (P56693). Other species not tested yet.

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

Background

SRY-Box Transcription Factor 10 (SOX10) belongs to a family of transcription factors characterized by a sequence-specific DNA-binding domain known as the high mobility group-box (HMGB). Members of the SOX family belong to the HMGB subfamily and represent a class of genes expressed during early embryonic development that are involved in cell fate specifications of progenitor cells and terminal cell differentiation in a variety of cell type linages (1-3). SOX10 is a key regulator in early development of neuronal crest cells that give rise to peripheral glial cells (4), melanocytes, cells of the enteric nervous system or chromaffin cells. In the central nervous system SOX10 is present in oligodendrocyte progenitors (OPCs) and remains expressed throughout oligodendrocyte (OL) development and linage. During OL development SOX10 exerts critical functions in terminal OL differentiation and myelin gene expression (5). SOX10 mutations have been reported to Waardenburg syndrome type 4, peripheral demyelinating neuropathy, central demyelinating leukodystrophy, Hirschsprung disease (PCWH), cancer and others.

Selected References for 347 404

Aged oligodendrocyte progenitors retain the capacity to respond to an inflammatory insult.
Fresenko EE, Kaiser KE, Burson BJ, Bahri CN, Ahmed NF, Bozik JB, Packer D, Tabor BJ, Beirowski B, Wedemeyer MA, Sun W, et al.
Experimental neurology (2026) 404: 115874. . **IHC; tested species: mouse**

Selected General References

From head to toes: the multiple facets of Sox proteins.
Wegner M et al. Nucleic Acids Res (1999) PubMed:10037800

Using the lineage determinants Olig2 and Sox10 to explore transcriptional regulation of oligodendrocyte development.
Sock E et al. Dev Neurobiol (2021) PubMed:34480425

SoxE factors: Transcriptional regulators of neural differentiation and nervous system development.
Weider M et al. Semin Cell Dev Biol (2017) PubMed:27552919

Sorting out Sox10 functions in neural crest development.
Kelsh RN et al. Bioessays (2006) PubMed:16927299

The transcription factor Sox10 is a key regulator of peripheral glial development.
Britsch S et al. Genes Dev (2001) PubMed:11156606

Access the online factsheet including applicable protocols at https://sysy.com/product/347404 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.