SYSY Antibodies

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Tenascin-C

Cat.No. 217 127; Monoclonal rat antibody, 200 µl hybridoma supernatant (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl hybridoma supernatant, lyophilized. For **reconstitution** add 200 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 : 500 up to 1 : 1000 (AP staining) (see remarks) **IP**: not tested yet **ICC**: 1 : 100 up to 1 : 500 **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 500 up to 1 : 1000
Clone	578
Subtype	IgG2a
Immunogen	Recombinant protein corresponding to AA 23 to 2210 from mouse Tenascin-C (UniProt Id: Q80YX1)
Epitop	AA 1082 to 1510 from mouse Tenascin-C (UniProt Id: Q80YX1)
Reactivity	Reacts with: rat, mouse (Q80YX1). Other species not tested yet.
Specificity	Specific for tenascin-C splice variants carrying the FNIII D domain.
Remarks	Tenascin-C variants detected by this antibody are downregulated during development and hardly detectable in adult animals **WB**: Due to the large size of this protein, we recommend NuPAGE 3-8% Tris-Acetate gels for SDS-PAGE.

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

Background

Tenascin-C, also referrred to as **TN-C**, **Cytoactin**, and **J1-200/220**, is a multimodular glycoprotein with neurite outgrowth-stimulating properties. It is composed of a cysteine rich amino-terminus followed by a stretch of EGF like and fibronectin type III (FNIII) repeats. Its C-terminus shows homologies to fibrinogen β and γ. In the central nervous system TN-C is transiently expressed by immature astrocytes and by subpopulations of neurons, e.g., retinal ganglion cells.

Selected References for 217 127

Expression of tenascin in the developing and adult cerebellar cortex.
Bartsch S, Bartsch U, Dörries U, Faissner A, Weller A, Ekblom P, Schachner M
The Journal of neuroscience : the official journal of the Society for Neuroscience (1992) 123: 736-49. . **WB, IHC**

Fibroblasts that proliferate near denervated synaptic sites in skeletal muscle synthesize the adhesive molecules tenascin(J1), N-CAM, fibronectin, and a heparan sulfate proteoglycan.
Gatchalian CL, Schachner M, Sanes JR
The Journal of cell biology (1989) 1085: 1873-90. . **ICC, IHC**

The glia-derived extracellular matrix glycoprotein tenascin-C promotes embryonic and postnatal retina axon outgrowth via the alternatively spliced fibronectin type III domain TNfnD.
Siddiqui S, Horvat-Bröcker A, Faissner A
Neuron glia biology (2008) 44: 271-83. . **ICC**

Tenascin-C promotes neurite outgrowth of embryonic hippocampal neurons through the alternatively spliced fibronectin type III BD domains via activation of the cell adhesion molecule F3/contactin.
Rigato F, Garwood J, Calco V, Heck N, Faivre-Sarrailh C, Faissner A
The Journal of neuroscience : the official journal of the Society for Neuroscience (2002) 2215: 6596-609. . **WB**

J1/tenascin-related molecules are not responsible for the segmented pattern of neural crest cells or motor axons in the chick embryo.
Stern CD, Norris WE, Bronner-Fraser M, Carlson GJ, Faissner A, Keynes RJ, Schachner M
Development (Cambridge, England) (1989) 1072: 309-19. . **IHC**

Selected General References

Mechano-regulated tenascin-C orchestrates muscle repair.
Flück M et al. Proc. Natl. Acad. Sci. U.S.A. (2008) PubMed:18757758

Structural and functional aberrations in the cerebral cortex of tenascin-C deficient mice.
Irintchev A et al. Cereb. Cortex (2005) PubMed:15537675

Tenascin-C promotes neurite outgrowth of embryonic hippocampal neurons through the alternatively spliced fibronectin type III BD domains via activation of the cell adhesion molecule F3/contactin.
Rigato F et al. J. Neurosci. (2002) PubMed:12151539

Tenascin-C contains distinct adhesive, anti-adhesive, and neurite outgrowth promoting sites for neurons.
Götz B et al. J. Cell Biol. (1996) PubMed:8647898

Fibroblasts that proliferate near denervated synaptic sites in skeletal muscle synthesize the adhesive molecules tenascin(J1), N-CAM, fibronectin, and a heparan sulfate proteoglycan.
Gatchalian CL et al. J. Cell Biol. (1989) PubMed:2469680

Access the online factsheet including applicable protocols at https://sysy.com/product/217127 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.