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) **IP**: not tested yet **ICC**: 1 : 100 up to 1 : 500 **IHC**: yes **IHC-P**: not tested yet
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

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, Mund SI, Schittny JC, Klossner S, Durieux AC, Giraud MN
Proceedings of the National Academy of Sciences of the United States of America (2008) 10536: 13662-7. .

Structural and functional aberrations in the cerebral cortex of tenascin-C deficient mice.
Irintchev A, Rollenhagen A, Troncoso E, Kiss JZ, Schachner M
Cerebral cortex (New York, N.Y. : 1991) (2005) 157: 950-62. .

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. .

Tenascin-C contains distinct adhesive, anti-adhesive, and neurite outgrowth promoting sites for neurons.
Götz B, Scholze A, Clement A, Joester A, Schütte K, Wigger F, Frank R, Spiess E, Ekblom P, Faissner A
The Journal of cell biology (1996) 1324: 681-99. .

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. .

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 our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera**: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies**: Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein.
  For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.