Tenascin-R, also referred to as TNR and J1-160/180, is an extracellular matrix glycoprotein expressed by oligodendrocytes and subpopulations of neurons in the adult CNS of vertebrates. TNR is a member of the Tenascin family of multidomain adhesion molecules and affects neuronal cell migration and neurite extension.

Selected References for 217 011

Mice deficient for tenascin-R display alterations of the extracellular matrix and decreased axonal conduction velocities in the CNS.


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Nutritional regulation of oligodendrocyte differentiation regulates perineuronal net remodeling in the median eminence.

Cell reports (2021) 362: 109362 . IHC; tested species: mouse

Saplingotic coupling of inner ear sensory cells is controlled by brevican-based extracellular matrix baskets resembling perineuronal nets.


Hyaluronan deficiency due to Has3 knock-out causes altered neuronal activity and seizures via reduction in brain extracellular space.


Tenascin-R restricts posttraumatic remodeling of motoneuron innervation and functional recovery after spinal cord injury in adult mice.

Apostolova I, Irintchev A, Schachner M

Postnatal development of perineuronal nets in wild-type mice and in a mutant deficient in tenascin-R.

Brückner G, Grosche J, Schmidt S, Härtig W, Margolis RU, Delpech B, Seitenbecher CI, Czaniera R, Schachner M

The distribution of tenascin-R in the developing avian nervous system.

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Isolation of a tenascin-R binding protein from mouse brain membranes. A phosphacan-related chondroitin sulfate proteoglycan.

Xiao ZC, Bartsch U, Mangolis RK, Rougon G, Montag D, Schachner M

Extracellular matrix remodeling through endocytosis and resurfacing of Tenascin-R.

Cell reports (2021) 362: 109362 . WB, IP, ICC, IHC, UPTAKE; KO, KD verified; tested species: mouse, rat

Selected General References

Competition and cooperation between tenascin-R, lecithins and contactin 1 regulate neurite growth and morphology.

Zacharias U, Rauch U

Tenascin-R plays a role in neuroprotection via its distinct domains that coordinate to modulate the microglia function.

Liao H, Bu WF, Wang TH, Ahmed S, Xiao ZC

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

Access the online factsheet including applicable protocols at https://sysy.com/product/217011 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!**
- 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.