

Product Information

Anti-Neurocan antibody, Mouse monoclonal
clone 650.24, purified from hybridoma cell culture

Catalog Number **N0913**

Product Description

Monoclonal Anti-Neurocan (mouse IgG1 isotype) is derived from the hybridoma 650.24 produced by the fusion of mouse myeloma cells (P3X cells) and splenocytes from BALB/c mice immunized with embryonic rat brain proteoglycans. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Neurocan recognizes rat neurocan (one band at 260 kDa and additional bands at 160 kDa). The product is useful in ELISA, immunoblotting, immunocytochemistry, and immunohistochemistry.

Neurocan is a chondroitin sulfate proteoglycan (known also as CSPG3) thought to be involved in the modulation of cell adhesion and migration. It accounts for 20–30% of chondroitin sulfate proteoglycans in early postnatal rat brain. The protein was first cloned from rat brain, and then from mouse and human, which share 63% sequence identity. The mouse neurocan cDNA encodes for a 1,257-amino acid protein with a 22-amino acid signal peptide followed by an immunoglobulin-like domain and repeating motifs characteristic of the hyaluronic acid-binding region of aggregating proteoglycans.

The C terminus part of the protein has a 60% identity to the fibroblast and cartilage proteoglycans versican and aggrecan proteins.^{1,2} Neurocan is found in large amounts in glial scar, a primarily astrocytic structure formed after an injury in the CNS. Neurocan exerts a negative effect on growing cerebellar axons.^{3,4}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.1–0.2 µg/mL is determined using neonatal rat brain treated with chondroitinase.

Note: In order to obtain the best results in various techniques and preparations, it is recommended to determine the optimal working dilution by titration.

References

1. Prange, C.K. et al., *Gene*, **221**, 199–205 (1998).
2. Rauch, U. et al., *J. Biol. Chem.*, **267**, 19536–19547 (1992).
3. Asher, R.A. et al., *J. Neurosci.*, **20**, 2427–2438 (2000).
4. Chen, Z.J. et al., *Mol. Cell. Neurosci.*, **20**, 125–139 (2002).

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