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ProductInformation

Monoclonal Anti- Phosphacan
Clone 122.2
produced in mouse, purified immunoglobulin

Catalog Number **P8874**

Product Description

Monoclonal Anti-Phosphacan (mouse IgM isotype) is derived from the hybridoma 122.2 produced by the fusion of mouse myeloma cells (P3X cells) and splenocytes from BALB/c mice immunized with rat brain proteoglycans. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Phosphacan recognizes rat phosphacan (approx. 180 kDa, a higher band may appear). The product is useful in immunoblotting, immunohistochemistry and immunocytochemistry.

Neural cell adhesion molecules (NCAM) that are expressed by astrocytes are localized in the membrane. These proteins mediate adhesion between neuronal elements, induce neurite outgrowth and mediate the interaction of mossy fibers with other fibers and with glial cells. Chondroitin sulfate proteoglycans are NCAM ligands present in the brain ECM, and are involved in cell-cell and cell-substrate interactions.[1-3] One of these ligands is the phosphacan protein, expressed mainly in astrocytes. The level of phosphacan increases in late embryogenesis, reaches a plateau two weeks postnatal and then remains stable. Phosphacan is the soluble extracellular domain of the receptor-type transmembrane protein tyrosine phosphatase (RPTPβ). RPTPβ induces cell adhesion and promotes neurite growth of primary tecal neurons and neural migration. Both phosphacan and RPTPβ can bind to NCAM and tenascin-C and –R. Phosphacan can oppose RPTPβ by competing for its binding sites. Both in hippocampal and spinal cord neurons, phosphacan can affect neuronal adhesion and neurite outgrowth.[1-3]

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: ~2 mg/ml.

Precautions and Disclaimer

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

Storage/Stability

For extended storage, freeze at -20 ^{0}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 discard if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.2-0.4 µg/ml is recommended using total extracts of rat brain.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Wu, Y.P., et al., *J. Cell Biol.*, **148**, 1295-1304 (2000).
2. Peles, E., et al., *Cell*, **82**, 251-260 (1995).
3. Johnson, K.G., and Van Vactor, D. *Physiol. Rev.*, **83**, 1-24 (2003).

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