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ProductInformation

Monoclonal Anti-Mouse Tenascin
Clone MTn-12
Rat Ascites Fluid

Product No. **T3413**

Product Description

Monoclonal Anti-Mouse Tenascin (rat IgG1 isotype) is derived from the MTn-12 hybridoma[1] produced by the fusion of rat myeloma cells and splenocytes from a Lou rat immunized with partially purified mouse tenascin.

Monoclonal Anti-Mouse Tenascin[1] reacts specifically with mouse tenascin. In supernatants of cultured mouse fibroblasts, the antibody precipitates two polypeptides of approximate molecular weights 210 and 260 kDa. It also recognizes these tenascin chains and the 230 kDa endo-glycosidase F-digested fragment in immunoblotting of tissue extracts and fibroblasts lysates under reducing conditions.[1,2] In ELISA, it was shown that the antibody reacts specifically against mouse tenascin, but not against fibronectin and collagen type I. No cross reactivity with tenascin of other species has been observed. In immunohistological testing of frozen tissue sections of mouse intestine, using immunofluorescent or immunoperoxidase staining, the antibody stains the core of the villi but not the epithelial cells.

Monoclonal Anti-Mouse Tenascin may be used for the localization of tenascin and the study of the role of tenascin in epithelial-mesenchymal interactions using various immunochemical assays including ELISA, immunoblot, dot blot and immunohistology.

Tenascin is a high molecular weight, multifunctional, extracellular matrix glycoprotein expressed in association with mesenchymal-epithelial interactions during development and in the neovasculature and stroma of undifferentiated tumors.[3] It has been described under a variety of names: cytotactin, hexabrachion protein, J1, myotendinous antigen (MI) and glioma mesenchymal extracellular matrix (GMEM). The tenascin molecule is a disulfide-linked hexamer; depending on species, the molecular weights of the subunits range from 190 to 320 kDa. In the mouse, two major subunits of tenascin with an apparent molecular weight of 210 and 260 kDa have been described. The shorter polypeptide predominates during earlier developmental stages and the larger polypeptide appears later in the embryonic gut and especially in the adult intestine.[1] Human tenascin has 3 subunits of 190, 200 and 220 kDa. Tenascin has been independently discovered in a variety of species and tissue types, often in the basement membrane or intercellular spaces. The expression of tenascin is associated with development and growth, both normal and pathological, whereas the distribution in normal adult tissue is restricted. It was proposed that actively growing, migrating and differentiating epithelial sheets can produce factors that can stimulate tenascin expression in the nearby mesenchyme. Human and chicken tenascin contain an RGD sequence which may function in cell adhesion and it seems likely that tenascin mediates cell attachment through an RGD-dependent integrin receptor.[4] Mouse tenascin does not contain an RGD sequence in the third type III repeat implicated in cell attachment, or in any other position.[2]

Reagents

The product is provided as ascites fluid with 15 mM sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile

A minimum dilution of 1:200 was determined by indirect immunofluorescent staining of unfixed, frozen tissue sections of mouse intestine.

In order to obtain best results in different techniques and preparations, it is recommended to that each individual user determine their optimal working dilutions by titration assay.

Storage

For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

References

1. Aufderheide, E., and Ekblom, P., J. Cell Biol., **107**, 2341 (1988).
2. Weller, A., et al., J. Cell Biol., **112**, 355 (1991).
3. Erickson, H., and Bourdon, M., Ann. Rev. Cell Biol., **5**, 71 (1989).
4. Bourdon, M., and Ruoslahti, E., J. Cell Biol., **108**, 1149 (1989).

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