Product No. A-9191
Lot 063H48281

Monoclonal Anti-Human Serum Amyloid P Component
Mouse Ascites Fluid
Clone SAP-5

Monoclonal Anti-Human Serum Amyloid P Component (mouse IgG2a isotype) is derived from the SAP-5 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice. Purified human serum amyloid P component was used as the immunogen. The isotype is determined using the Sigma ImmunoType™ Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)* as a preservative.

Specificity

Monoclonal Anti-Human Serum Amyloid P Component (SAP) recognizes native SAP, but not the denatured-reduced form of SAP. It does not cross-react with human C-reactive protein (CRP), human haptoglobin, human α_1-acid glycoprotein or human IgG.

Description

Serum Amyloid P Component (SAP)[1], is a pentraxin (cyclic pentameric protein) compound of 10 identical noncovalently-linked subunits (22-24 kD each) comprised of 2 face-to-face pentameric discs (200-220 kD). SAP is synthesized primarily in liver hepatocytes, is physically, chemically and immunologically identical to tissue P component, and has a striking homology with C-reactive protein (CRP) and with serum α_1-glycoprotein. SAP pentraxins characteristically show calcium-dependent binding to polysaccharides such as agarose via pyruvate acetal and zymosan via mannose groups. There have been reports on SAP's role as a major calcium-dependent specific DNA binding protein of the serum, and as an activator of the classical complement pathway via collagen-like region of C1q.[2] The precise biological function of SAP is not known, but it appears to behave only to limited extent as an acute-phase reactant, especially in situations or species where CRP is lacking. It seems likely that together with CRP it serves an undefined function in the response of the host to the environment. Normal human serum levels are about 40 μg/ml, and unlike CRP, the levels of SAP are not changed significantly during pathological processes that elevate CRP levels. Although SAP makes up less than 10% of amyloid deposits, it has been implicated in all types of naturally occurring and experimental amyloids.[3] Antibodies to SAP have been used in immunohistochemical studies of amyloid deposits, cutaneous basement lamellae and elastic fibers.[4]

Uses

Monoclonal Anti-Human Serum Amyloid P Component may be used for the localization of native serum amyloid P component using ELISA and dot-blot.

Titer: 1:800

Titer was determined by indirect ELISA using freshly prepared human serum amyloid P component at 10 µg/ml for coating.

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

Storage

For continuous use, store at 2-8°C. 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.

* Due to the sodium azide content a material safety data 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.

References

1. Pepys, M., et al., Adv. Immunol., **34**, 141 (1983).
2. Hicks, P., et al., J. Immunol., **149**, 3689 (1992).
3. Skinner, M., et al., Ann. N.Y. Acad. Sci., **389**, 190 (1982).
4. Shirahama, T., et al., in: Advances in Immunohistochemistry, De Lellis, R.A., (Ed.) p. 277, Masson Publ. (1984).