

### Serum Amyloid P component or SAP Antibodies

Cat. # SAP12-RS

Mouse SAP reference serum

SIZE: 100 ul

Pentraxins family of proteins acquired the name from their ability to form pentameric (or decameric) structures formed by non-covalent interactions. C-reactive protein (**CRP or PTX1**; mature chain 206 aa; chromosome 1q21-23) nonglycosylated, ~24 kda monomer and ~118 kda pentamer) is a ubiquitous protein found in both vertebrates and invertebrates. Originally CRP was defined as a substance, observed in the plasma of patients with acute infections, that reacted with the C polysaccharide of the pneumococcus. It is one of the plasma proteins that are called acute phase reactants because of a pronounced rise in concentration after tissue injury or inflammation; in the case of CRP the rise may be 1000-fold or more. CRP is composed of 5 identical, 21,500-molecular weight subunits. It is detectable on the surface of about 4% of normal peripheral blood lymphocytes. Acute phase reactant CRP is produced in the liver; those cells produce CRP detectable on lymphocytes.

**Serum amyloid P component or SAP or APCS, or PTX2** (mature chain 204 aa, chromosome 1q21-23) with which CRP has about 59% homology, is situated in the same area of chromosome 1. SAP is universally present in amyloid deposits (senile plaque and neurofibrillary tangles) in Alzheimer's patients. SAP levels in CSF can be useful for assessing cognitive impairment in AD patients. However, SAP appeared not to be required for A-beta deposition since no endogenous SAP immunoreactivity was found in mice overexpressing APP.

In mice with a targeted deletion of the SAP gene, induction of reactive amyloidosis was retarded, demonstrating the participation of SAP in pathogenesis of amyloidosis in vivo and confirming that inhibition of SAP binding to amyloid fibrils is an attractive therapeutic target. SAP knock out mice develop antinuclear autoimmunity and glomerulonephritis. However the exact role of SAP in SLE is not clear. SAP also neutralizes LPS and it is potentially useful in defense against serious gram-negative sepsis.

### Source of Antigen and Antibodies

**Mouse SAP reference serum (Cat # SAP12-RS)** was obtained from mice injected with LPS and acute phase serum collected 48 hours later. SAP concentration is 100 ug/ml and C3 (680 ug/ml) were determined (see lot specific concentration on the vial). It is supplied in 0.05% sodium azide. It can be used as reference serum in ELISA and other immunoassays. Store in suitable aliquots frozen at -20oC.

**Shipping:** 4oC for solutions and room temp for powder.

Stability: 6-12 months from the date of shipping.

### General References:

Mortensen RF (1985) *Immunogenetics* 22: 367-375;  
Whitehead AS et al (1988) *Immunogenetics* 28: 388-390;  
Mantzouranis EC et al (1985) *J. Biol. Chem.* 260: 7752-7756;  
Botto M et al (1997) *Nature Med.* 3: 855-859;  
pepys MB et al (1979) *Nature* 278, 259;

*\*All product are for In vitro research use only.*

### Related material available from ADI

Rat and Dog CRP antibodies and reference controls, Human and Rat CRP ELISA Kits

Mouse and Human SAP antibodies and purified proteins.

SAP12-RS

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