

Human Serum Amyloid P component or SAP Antibodies

Cat. # SAP12-S, Rabbit Anti-Human SAP antiserum # 2, SIZE: 100 ul

Cat. # SAP13-M, Mouse Monoclonal Anti-Human SAP IgG # 1, aff pure, SIZE: 100 ug

Cat. # SAP15-N, Purified Human SAP protein, SIZE: 100 ug

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 Alzheimers 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

Human SAP was purified (>99%) from acute phase serum. All human source materials have tested negative for HIV 1, HIV 2, HIV Ag, HBsAg and HCV. No test guarantees a product to be non-infectious. Therefore, all material derived from human fluids or tissues should be considered as potentially infectious. Purified human SAP in native form is approx 235 kDa (monomer approx 25 kda).

Purified human SAP (**Cat # SAP15-N**) is supplied in 10 mM Tris, pH 8.0, 140 mM NaCl, 10 mM EDTA, and 0.05% sodium azide at 100 ug/100 ul either as liquid or in powder form. Store undiluted liquid or powder at -20oC. Reconstitute powder in 100 ul water and store frozen at -20oC in suitable aliquots. Avoid repeated freeze and thaw.

Purified human SAP was used to produce rabbit polyclonal antiserum (**cat # SAP12-S**) or mouse monoclonal antibody.

Clones producing anti-human SAP (**cat # SAP13-M**) antibody (IgG1) was expanded as ascites antibody purified by immunoaffinity chromatography.

Antibodies are supplied as undiluted rabbit antiserum (100 ul/vial) or mouse monoclonal IgG1 (100 ug/vial) in PBS pH 7.4 containing 0.05% sodium azide or in powder form.

Store undiluted liquid antibody or powder at -20°C or below. Powder should be reconstituted in 100 µl water and stored frozen in suitable aliquots. Avoid repeated freeze and thaw.

Suggested Dilutions: 1:500-1:5K for Western; 1:5K-1:20K for ELISA. Further optimization may be needed under actual experimental conditions.

Immunohistochemistry: suggested dilution 1:100-1:500. Staining of mouse tissues identifies only those structures known to contain SAP.

Species Specificity

SAP12-S and SAP13-M antibodies are specific for human SAP with no crossreactivity with CRP or other pentraxins. It has minimal crossreactivity with mouse SAP. Antibody crossreactivity with other species not tested. We recommend using anti-mouse SAP (cat # SAP11-S) for detecting mouse SAP.

Shipping: 4°C for solutions and room temp for powder.

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

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.