

# SAP (C-11): sc-393948

## BACKGROUND

Serum amyloid P (SAP) is a glycoprotein belonging to the pentraxin family of proteins, which has a characteristic pentameric organization and calcium-dependent ligand binding. Secreted by liver epithelial cells, SAP is found in serum and urine. Although the function of SAP has not been clearly established, it has been shown to interact with DNA and histones and is thought to play a role in scavenging nuclear material released from damaged circulating cells. Also designated PTX2, SAP is a precursor of the protein amyloid P component (AP), which is universally associated with the amyloid deposits in all forms of amyloidoses, including Alzheimer's disease. SAP is a decamer of ten identical, noncovalently linked subunits, each of which may be posttranslationally modified by glycosylation.

## REFERENCES

- Mantzouranis, E.C., et al. 1985. Human serum amyloid P component. cDNA isolation, complete sequence of pre-serum amyloid P component and localization of the gene to chromosome 1. *J. Biol. Chem.* 260: 7752-7756.
- Floyd-Smith, G., et al. 1986. The human C-reactive protein gene (CRP) and serum amyloid P component gene (APCS) are located on the proximal long arm of chromosome 1. *Immunogenetics* 24: 171-176.
- Landsmann, P., et al. 1994. Binding of human serum amyloid P component (hSAP) to human neutrophils. *Eur. J. Biochem.* 223: 805-811.
- Pepys, M.B., et al. 1994. Human serum amyloid P component is an invariant constituent of amyloid deposits and has a uniquely homogeneous glycostructure. *Proc. Natl. Acad. Sci. USA* 91: 5602-5606.

## CHROMOSOMAL LOCATION

Genetic locus: APCS (human) mapping to 1q23.2; *Apcs* (mouse) mapping to 1 H3.

## SOURCE

SAP (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 175-202 near the C-terminus of SAP of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SAP (C-11) is available conjugated to agarose (sc-393948 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393948 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393948 PE), fluorescein (sc-393948 FITC), Alexa Fluor® 488 (sc-393948 AF488), Alexa Fluor® 546 (sc-393948 AF546), Alexa Fluor® 594 (sc-393948 AF594) or Alexa Fluor® 647 (sc-393948 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393948 AF680) or Alexa Fluor® 790 (sc-393948 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393948 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

SAP (C-11) is recommended for detection of SAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SAP siRNA (h): sc-42972, SAP siRNA (m): sc-42973, SAP shRNA Plasmid (h): sc-42972-SH, SAP shRNA Plasmid (m): sc-42973-SH, SAP shRNA (h) Lentiviral Particles: sc-42972-V and SAP shRNA (m) Lentiviral Particles: sc-42973-V.

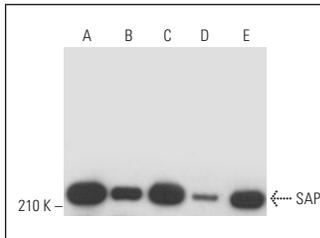
Molecular Weight of SAP oligomeric protein: 200 kDa.

Molecular Weight of SAP noncovalently bound subunit: 26 kDa.

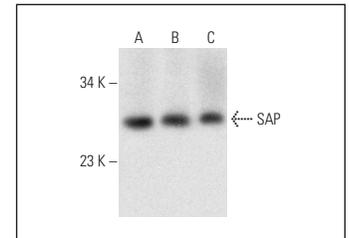
Molecular Weight of glycosylated SAP subunit: 30 kDa.

Positive Controls: human kidney extract: sc-363764, human breast extract: sc-363753 or HeLa whole cell lysate: sc-2200.

## DATA



SAP (C-11): sc-393948. Western blot analysis of SAP expression in HeLa (A), HL-60 (B), c4 (C), F9 (D) and Hep G2 (E) whole cell lysates.



SAP (C-11): sc-393948. Western blot analysis of SAP expression in human kidney (A) and human breast (B) tissue extracts and human plasma (C).

## SELECT PRODUCT CITATIONS

- Xu, X., et al. 2020. PD-1 and BTLA regulate T cell signaling differentially and only partially through SHP1 and SHP2. *J. Cell Biol.* 219: e201905085.
- Aversa-Marnai, M., et al. 2022. Different response of *Acipenser gueldenstaedtii* CRP/SAP and SAA to bacterial challenge and chronic thermal stress sheds light on the innate immune system of sturgeons. *Fish Shellfish Immunol.* 121: 404-417.
- Cordido, A., et al. 2022. Quantitative proteomic study unmasks Fibrinogen pathway in polycystic liver disease. *Biomedicines* 10: 290.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.