

CRP (C-13): sc-18306

BACKGROUND

Pentraxins, which include C-reactive protein (CRP) and serum amyloid P component (SAP), are prototypic acute phase proteins. CRP and SAP are produced by liver epithelial cells and are characterized by a cyclic pentameric structure and calcium-dependent ligand binding. IL-6 is the major inducer of human CRP gene, and IL-1 and steroids can enhance this induction. Testosterone is required for the expression of CRP transgene *in vivo*, whereas testosterone is not required for expression of the SAP gene. During the acute-phase response, cytokine C5a acts with IL-6 and/or IL-1 β to promote upregulation of the CRP and SAP genes. Both Stat3 and C/EBP are involved in mouse SAP gene expression, but only Stat3 is involved in mouse CRP gene expression. SAP binds to a variety of molecules, including autoantigens and chromatin. Both CRP and SAP also bind to Fc γ R and opsonize particles for phagocytosis by human polymorphonuclear leukocytes. Opsonization of zymosan by CRP is mediated through Fc γ RI, while Fc γ RII and Fc γ RIII are receptors for SAP. Therefore, CRP and SAP play critical roles in the host defense system.

REFERENCES

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- Jensen, L.E., et al. 1997. Acute phase proteins in salmonids: evolutionary analyses and acute phase response. *J. Immunol.* 158: 384-392.
- Szalai, A.J., et al. 1998. Testosterone and IL-6 requirements for human C-reactive protein gene expression in transgenic mice. *J. Immunol.* 160: 5294-5299.
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- Ochrietor, J.D., et al. 2000. Role of Stat3 and C/EBP in cytokine-dependent expression of the mouse serum amyloid P-component (SAP) and C-reactive protein (CRP) genes. *Cytokine* 12: 888-899.

CHROMOSOMAL LOCATION

Genetic locus: CRP (human) mapping to 1q23.2.

SOURCE

CRP (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CRP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18306 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CRP (C-13) is recommended for detection of CRP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 CRP siRNA (h): sc-40815, CRP shRNA Plasmid (h): sc-40815-SH and CRP shRNA (h) Lentiviral Particles: sc-40815-V.

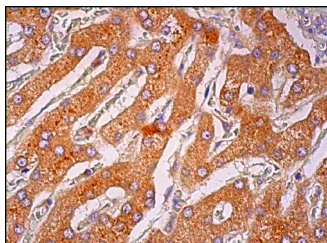
Molecular Weight of CRP monomer: 24-30 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Caki-1 cell lysate: sc-2224 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CRP (C-13): sc-18306. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **CRP (26D7): sc-69770**, our highly recommended monoclonal alternative to CRP (C-13).