

CRP (H-90): sc-30047

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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- Introna, M., et al. 1996. Cloning of mouse Ptx3, a new member of the pentraxin gene family expressed at extrahepatic sites. *Blood* 87: 1862-1872.
- 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.
- 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.
- Szalai, A.J., et al. 2000. Complement-dependent acute-phase expression of C-reactive protein and serum Amyloid P component. *J. Immunol.* 165: 1030-1035.
- Bharadwaj, D., et al. 2001. Serum Amyloid P component binds to Fc γ R and opsonizes particles for phagocytosis. *J. Immunol.* 166: 6735-6741.

CHROMOSOMAL LOCATION

Genetic locus: CRP (human) mapping to 1q23.2; Crp (mouse) mapping to 1 H3.

SOURCE

CRP (H-90) is a rabbit polyclonal antibody raised against amino acids 19-108 mapping near the N-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.

APPLICATIONS

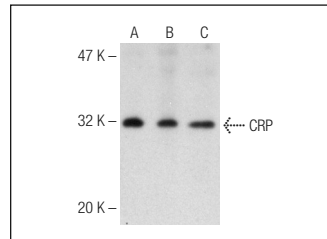
CRP (H-90) is recommended for detection of CRP of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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 CRP siRNA (h): sc-40815, CRP siRNA (m): sc-40816, CRP shRNA Plasmid (h): sc-40815-SH, CRP shRNA Plasmid (m): sc-40816-SH, CRP shRNA (h) Lentiviral Particles: sc-40815-V and CRP shRNA (m) Lentiviral Particles: sc-40816-V.

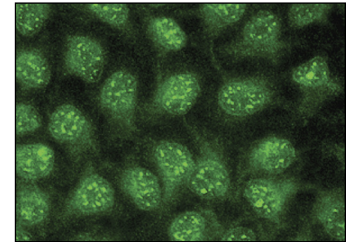
Molecular Weight of CRP monomer: 24-30 kDa.

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

DATA



CRP (H-90): sc-30047. Western blot analysis of CRP expression in Hep G2 (A), Caki-1 (B) and Jurkat (C) whole cell lysates.



CRP (H-90): sc-30047. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Magee, T.R., et al. 2008. Down-regulation of transcription factor peroxisome proliferator-activated receptor in programmed hepatic lipid dysregulation and inflammation in intrauterine growth-restricted offspring. *Am. J. Obstet. Gynecol.* 199: 271.e1-271.e5.

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.


 MONOS
Satisfaction
Guaranteed

Try **CRP (26D7): sc-69770** or **CRP (ML-12): sc-73864**, our highly recommended monoclonal alternatives to CRP (H-90).