

CRP (26D7): sc-69770

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 C5 α 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

- Alles, V.V., et al. 1994. Inducible expression of Ptx3, a new member of the pentraxin family, in human mononuclear phagocytes. *Blood* 84: 3483-3493.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

CRP (26D7) is a mouse monoclonal antibody raised against recombinant CRP of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 1% glycerol and < 0.1% stabilizer protein.

APPLICATIONS

CRP (26D7) is recommended for detection of CRP of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000).

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.

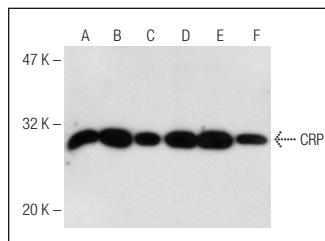
Molecular Weight of CRP monomer: 24-30 kDa.

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

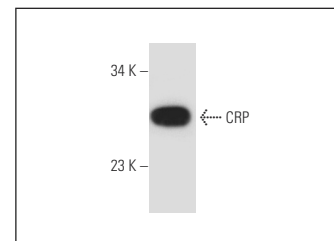
STORAGE

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

DATA



CRP (26D7): sc-69770. Western blot analysis of CRP expression in Hep G2 (A), Caki-1 (B), Jurkat (C), HEL 92.1.7 (D), MIA PaCa-2 (E) and AML-193 (F) whole cell lysates.



CRP (26D7): sc-69770. Western blot analysis of CRP expression in RBL-1 whole cell lysate

SELECT PRODUCT CITATIONS

- Pan, T.L., et al. 2011. Prospective highlights of serum glycoproteins in spontaneous tolerance after orthotopic liver transplantation. *Clin. Chim. Acta* 412: 604-613.
- Sucajtys-Szulc, E., et al. 2018. Hepatocyte nuclear factors as possible C-reactive protein transcriptional inducer in the liver and white adipose tissue of rats with experimental chronic renal failure. *Mol. Cell. Biochem.* 446: 11-23.
- Racz, B., et al. 2018. A non-retinoid antagonist of retinol-binding protein 4 rescues phenotype in a model of Stargardt disease without inhibiting the visual cycle. *J. Biol. Chem.* 293: 11574-11588.
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- Cheng, C.Y., et al. 2020. Nrf2/HO-1 partially regulates cytoprotective effects of carbon monoxide against urban particulate matter-induced inflammatory responses in oral keratinocytes. *Cytokine* 133: 155185.
- Li, J., et al. 2021. Assessing the safety of transarterial locoregional delivery of low-density lipoprotein docosahexaenoic acid nanoparticles to the rat liver. *Eur. J. Pharm. Biopharm.* 158: 273-283.
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- Wang, Y., et al. 2022. Repeated *trans*-arterial treatments of LDL-DHA nanoparticles induce multiple pathways of tumor cell death in hepatocellular carcinoma bearing rats. *Front. Oncol.* 12: 1052221.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.