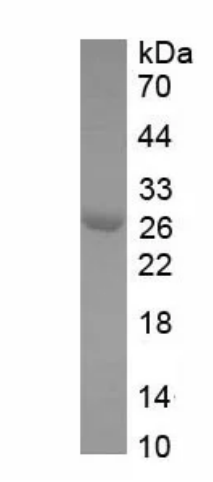
Active C Reactive Protein (CRP)

Catalog#:PER12520

概述（Summary）

别称（Alternative Names）	C-RP; PTX1; Pentraxin-Related; Pentraxin 1
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【His20-Ser230】
Accession #	P48199
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	27.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Displays several functions associated with host defense: it promotes agglutination, bacterial capsular swelling, phagocytosis and complement fixation through its calcium-dependent binding to phosphorylcholine. Can interact with DNA and histones and may scavenge nuclear material released from damaged circulating cells.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

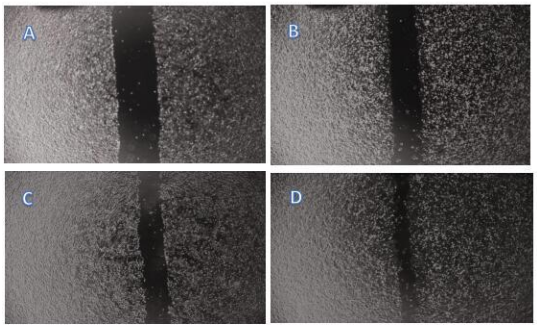


Figure 1. Wound healing assay of HepG2 cells after affect with CRP.

A. HepG2 cells cultured in DMEM without CRP for 0h ;
B. HepG2 cells cultured in DMEM without CRP for 48h;
C. HepG2 cells cultured in DMEM with 62.5ng/ml CRP for 0h;
D. HepG2 cells cultured in DMEM with 62.5ng/ml CRP for 48h

C-reactive protein (CRP) is an annular (ring-shaped), pentameric protein found in blood plasma, whose levels rise in response to inflammation. It is an acute-phase protein of hepatic origin that increases following interleukin-6 secretion by macrophages and T cells. Its physiological role is to bind to lysophosphatidylcholine expressed on the surface of dead or dying cells (and some types of bacteria) in order to activate the complement system via C1q.Besides,CRP have been proved can promote migration of HepG2 cells, 5×104 cells were seeded into 6 well plates. After cell confluent, using a (yellow) pipette tip make a straight scratch, simulating a wound, then washing the wells three times with PBS. Adding 1% serum standard DMEM containing various concentrations of recombinan rat CRP to each well, incubating the plate for 48 hours at 37℃, 5% CO2. Use Image J to measure the area of a scratch, then caculate the cell motility with (0harea -48harea)/0harea ×100%. After affect with 62.5ng/ml CRP for 48h, cell motility is 47%,wiithout affect by CRP, the cell motility is 27%. The results observed by inverted microscope was shown in Figure1. C reactive protein (CRP) is an annular (ring-shaped), pentameric protein found in blood plasma, whose levels rise in response to inflammation. It is an acute-phase protein of hepatic origin that increases following interleukin-6 secretion by macrophages and T cells. Its physiological role is to bind to lysophosphatidylcholine expressed on the surface of dead or dying cells (and some types of bacteria) in order to activate the complement system via C1q. Besides, Coagulation Factor II (F2) has been identified as an interactor of CRP, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat CRP and recombinant rat F2. Briefly, CRP was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to F2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CRP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25

minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant rat CRP and recombinant rat F2 was shown in Figure 1, the EC50 for this effect is 0.019 ug/mL.

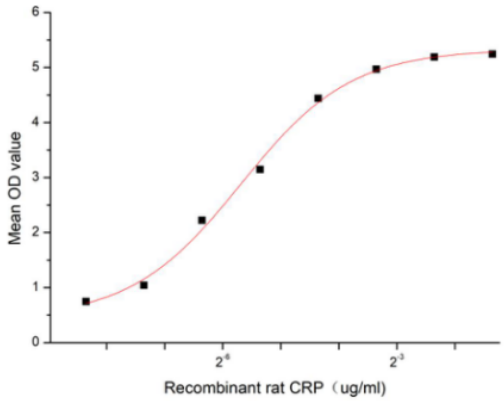


Figure 2. The binding activity of recombinant rat CRP and recombinant rat F2

注意事项（Note）

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