

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse C-Reactive Protein/CRP in Western blots and ELISAs. In sandwich immunoassays, less than 0.1% cross-reactivity with recombinant human C-Reactive Protein/CRP, recombinant rat C-Reactive Protein/CRP and recombinant porcine C-Reactive Protein/CRP is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse C-Reactive Protein/CRP (R&D Systems, Catalog # 1829-CR) His20-Ser225 Accession # Q91XB3
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse C-Reactive Protein/CRP (Catalog # 1829-CR)
Mouse C-Reactive Protein/CRP Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Mouse C-Reactive Protein/CRP Antibody (Catalog # MAB1829)
ELISA Detection	0.1-0.4 µg/mL	Mouse C-Reactive Protein/CRP Biotinylated Antibody (Catalog # BAF1829)
Standard		Recombinant Mouse C-Reactive Protein/CRP (Catalog # 1829-CR)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

C-reactive protein (CRP) is a member of the pentraxin family of plasma proteins that are part of the lectin fold superfamily of calcium-dependent, carbohydrate-binding proteins (1). CRP is named for its ability to bind to the C-polysaccharide of *Strep. Pneumoniae*. CRP is characterized by cyclic pentameric structure that contains five identical protomers/subunits, each exhibiting a lectin fold composed of two antiparallel β-sheets with a fattened jellyroll topology. The mouse CRP precursor is 225 amino acids (aa) in length and contains a signal peptide of 19 aa with a mature polypeptide of 206 aa (2, 3). There is one intrachain disulfide bond and no N-linked glycosylation site(s). Although rat CRP is glycosylated at an N-linked site, human, mouse and rabbit CRP all appear to be non-glycosylated (1, 4, 5). In mouse, the protomers are assembled non-covalently to form the pentamer; in rat, two of the five protomers are covalently linked (6). Mature mouse CRP shares 74%, 71%, 79%, and 68% aa sequence identity with rat, human, hamster and guinea pig CRP, respectively. In human, CRP is induced in hepatocytes principally by IL-6 (1). In mouse, IL-6 has very little effect. Mouse CRP induction is due principally to IL-1 (1, 7), with another pentraxin, SAP, being IL-6 inducible (7). CRP exhibits calcium-dependent binding to ligands. Phosphocholine (PCh), a constituent of many bacterial and fungal cell walls, is a principal ligand of CRP. CRP will also bind to the cell membrane of injured necrotic and apoptotic cells. In this context, CRP acts as an opsonin, binding to Fcγ RI and II, and serves as an anti-inflammatory agent (8).

References:

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5. Black, S. *et al.* (2004) *J. Biol. Chem.* **279**:48487.
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