

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human C-Reactive Protein/CRP in direct ELISAs and Western blots. In Western blots, approximately 35% cross-reactivity with recombinant mouse CRP and 10% cross-reactivity with recombinant rat CRP is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human C-Reactive Protein/CRP Phe17-Pro224 Accession # P02741
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CRP is a member of the pentraxin family of proteins that are characterized by a cyclic pentameric structure. Human CRP gene encodes a 224 amino acids precursor. The mature human CRP protein has 206 amino acids that are non-covalently linked to form the pentamer. Human CRP shares 71% and 64% amino acid sequence homology with mouse and rat respectively.

CRP, synthesized by hepatocytes, is a major acute phase serum protein in human. IL-6, IL-1 and glucocorticoids are the major inducer of the CRP gene. In response to infection, inflammation or tissue damage, the level of CRP in human serum can increase 1,000-fold within 24-48 hours. It will come back to base level of less than 1 µg/mL very fast. Human CRP is an acute-phase serum protein that plays a role in the first line in host innate host defense. Like other pentraxins, CRP exhibits Ca⁺⁺ - dependent binding to ligands. Phosphocholine (PCh), a constituent of many bacterial and fungal walls, is a principal ligand of CRP. CRP also binds to the membrane of injured cells, membrane and nuclear components of necrotic and apoptotic cells. Upon binding with the ligands, CRP is recognized by C1q and initiates the activation of complement cascade. Ligand bound CRP also binds to Fcγ RI and Fcγ RIIa on phagocytes and activates phagocytotic responses. In addition to phagocytosis, CRP also can induce production of hydrogen peroxide and inflammatory cytokines, such as IL-1, IL-6 and TNF-α by monocytes. With these functions, human CRP is an important serum protein for anti-bacterial pathogen and clearance of damaged and apoptotic cells. However, in mouse, CRP is expressed at very low level and is not an acute phase reactant. Serum amyloid P component (SAP), another pentraxin, is the major acute phase serum protein in mice. It has been shown that high levels of CRP in humans is associated with an increased risk of cardiovascular diseases.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.