

C-Reactive Protein Protein, Human, Recombinant

General Information

Synonyms:	C-Reactive Protein;C-reactive protein, pentraxin-related;PTX1
Protein Construction:	A DNA sequence encoding the human CRP (P02741-1) (Met1-Pro224) was expressed and purified. Predicted N terminal: Gln 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P02741-1
Molecular Weight:	23 kDa (predicted); 26 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 90 % as determined by SDS-PAGE ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 0.2M NaCl, 5 mM CaCl ₂ , pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

C-reactive protein (CRP) is synthesized by the liver in response to factors released by fat cells. It is a member of the pentraxin family of proteins. The levels of CRP rise in response to inflammation. Human C-reactive protein (CRP) is the classical acute phase reactant, the circulating concentration of which rises rapidly and extensively in a cytokine-mediated response to tissue injury, infection and inflammation. Serum CRP values are routinely measured, empirically, to detect and monitor many human diseases. However, CRP is likely to have important

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host defence, scavenging and metabolic functions through its capacity for calcium-dependent binding to exogenous and autologous molecules containing phosphocholine (PC) and then activating the classical complement pathway. CRP may also have pathogenic effects and the recent discovery of a prognostic association between increased CRP production and coronary atherothrombotic events is of particular interest.

Reference

Pepys MB. et al., 2003, J Clin Invest. 111 (12): 1805-12.

Thompson D. et al., 1999, Structure. 7(2): 169-77.

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