



## Synonym

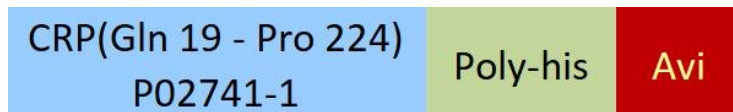
CRP,C-reactive Protein

## Source

Biotinylated Human C-Reactive Protein, His,Avitag(CRP-H82E4) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Pro 224 (Accession # [P02741-1](#)).

Predicted N-terminus: Gln 19

## Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 26.6 kDa. The protein migrates as 29 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Supplied as 0.2 µm filtered solution in 20 mM Tris, 1 M NaCl, pH8.0 with trehalose as protectant.

Contact us for customized product form or formulation.

## Shipping

*This product is supplied and shipped with dry ice, please inquire the shipping cost.*

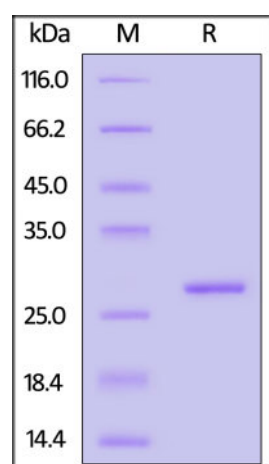
## Storage

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

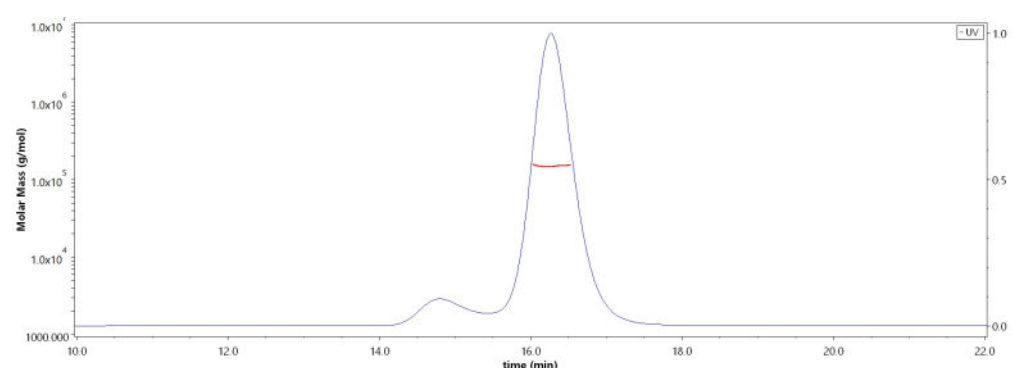
## SDS-PAGE



Biotinylated Human C-Reactive Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA

## SEC-MALS

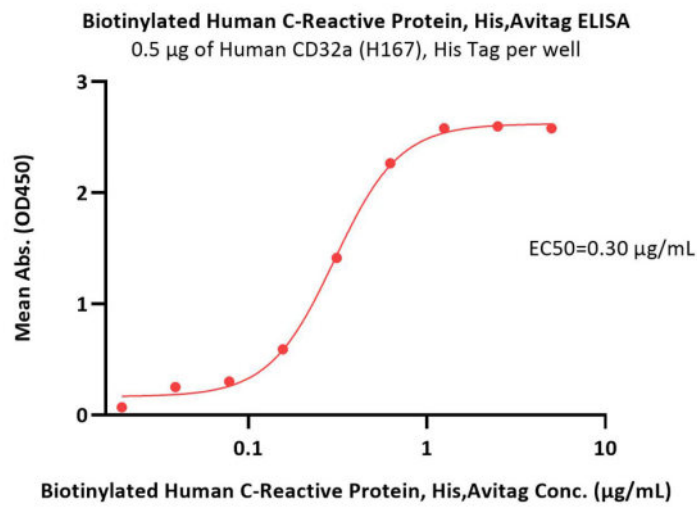


The purity of Biotinylated Human C-Reactive Protein, His,Avitag (Cat. No. CRP-H82E4) is more than 90% and the molecular weight of this protein is around 145-167 kDa verified by SEC-MALS.

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Immobilized Human CD32a (H167), His Tag (Cat. No. CD1-H5223) at 5 µg/mL (100 µL/well) can bind Biotinylated Human C-Reactive Protein, His,Avitag (Cat. No. CRP-H82E4) with a linear range of 0.02-1.25 µg/mL (QC tested).

## Background

C-reactive protein (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 noncovalently 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. IL6, IL1 and glucocorticoids are the major inducer of the CRP gene. The physiological role of CRP is to bind to phosphocholine expressed on the surface of dead or dying cells (and some types of bacteria) in order to activate the complement system. CRP binds to phosphocholine on microbes and damaged cells and enhances phagocytosis by macrophages. Thus, CRP participates in the clearance of necrotic and apoptotic cells. CRP rises up to 50,000-fold in acute inflammation, such as infection. It rises above normal limits within 6 hours, and peaks at 48 hours. Its half-life is constant, and therefore its level is mainly determined by the rate of production. It has been shown that high levels of CRP in humans is associated with an increased risk of cardiovascular diseases.

## Clinical and Translational Updates

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