Human C-Reactive Protein (CRP) Protein, His Tag

Catalog # CRP-H5226AI

Application

Human C-Reactive Protein, His Tag AIDD-Ready protein is designed for direct use in SPR assays. It is supplied in a sugar-free, glycerol-free formulation to eliminate refractive index interference in SPR. No desalting or buffer exchange is required before use, simplifying the SPR workflow and supporting high-throughput experimental validation to accelerate the transition from AI prediction to wet-lab validation.

Features and Advantages

- **Directly compatible with SPR:** No desalting or buffer exchange required; supplied as a liquid to reduce sample preparation and improve experimental efficiency.
- **High batch-to-batch consistency:** Each lot is released using SPR QC to ensure experimental reproducibility.
- **Validated with representative drugs:** SPR binding activity is validated using representative drug antibodies to ensure suitability for drug screening and evaluation.

Synonyms

CRP, C-reactive Protein

Source

Human C-Reactive Protein, His Tag (CRP-H5226AI) 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.

The protein has a calculated MW of 23.9 kDa. The protein migrates as 23-26 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Formulated in a proprietary trehalose-free buffer, supplied ready-to-use for SPR/BLI analysis - no buffer exchange required.

For detailed formulation, please refer to the batch-specific COA.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

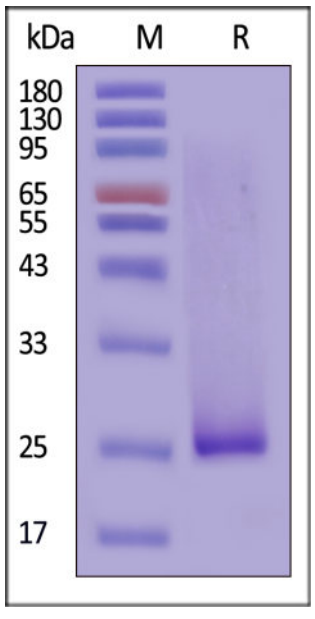
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

ACRO Quality Management System

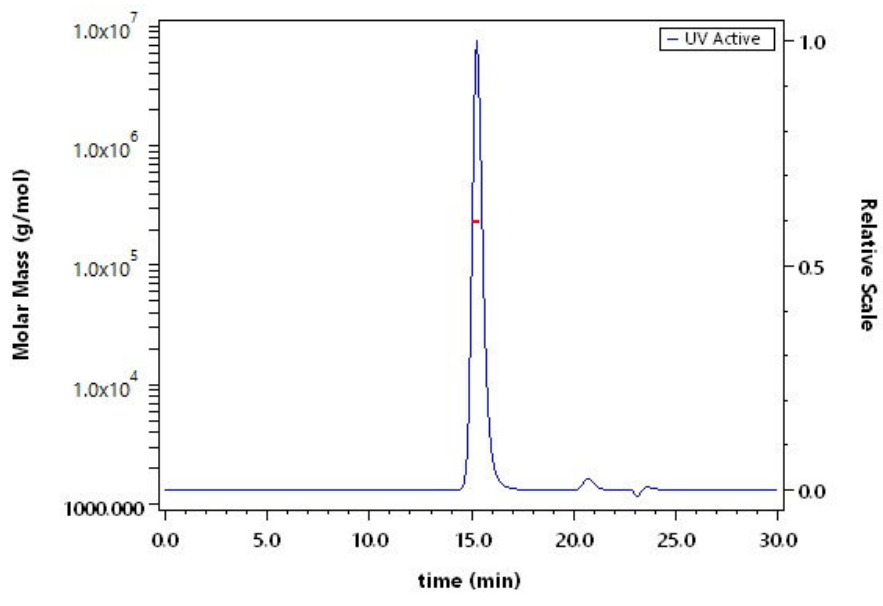
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



Human C-Reactive Protein, His Tag 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).

SEC-MALS



The purity of Human C-Reactive Protein, His Tag (Cat. No. CRP-H5226AI) is more than 95% and the molecular weight of this protein is around 220-250 kDa verified by SEC-MALS.

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 pentameter. 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.

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