

# Biotinylated Dog Complement C2 Protein, His,Avitag™ (active enzyme)

Catalog # CO2-D82E4



BIOSYSTEMS  
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Surprise Inside!

## Synonym

C2, Complement C2, Complement Component C2

## Source

Biotinylated Dog Complement C2 Protein, His,Avitag(CO2-D82E4) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Leu 784 (Accession # [A0A8I3NQQ5](#)).

Predicted N-terminus: Met 1

## Molecular Characterization

Complement C2(Met 1 - Leu 784)  
A0A8I3NQQ5    Poly-his    Avi

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

The protein has a calculated MW of 85 kDa. The protein migrates as 95-120 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

>90% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in 20 mM Tris, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

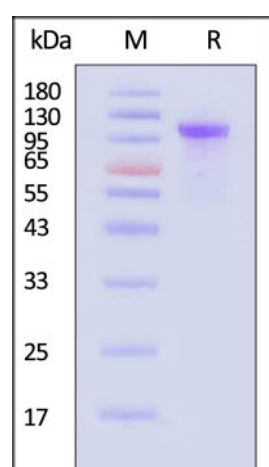
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Biotinylated Dog Complement C2 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 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity

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10/24/2023

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Measured by its ability to cleave a colorimetric peptide substrate, N-carbobenzyloxy-Gly-Arg-ThioBenzyl ester (Z-GR-SBzl), in the presence of 5,5'-Dithio-bis (2-nitrobenzoic acid) (DTNB). The specific activity is >100 pmol/min/μg (QC tested).

## Background

C2 is a major histocompatibility complex class-III protein. Component C2 which is part of the classical pathway of the complement system is cleaved by activated factor C1 into two fragments: C2b and C2a. C2a, a serine protease, then combines with complement factor C4b to generate the C3 or C5 convertase. The lectin (LP) and classical (CP) pathways are two of the three main activation cascades of the complement system. These pathways start with recognition of different pathogen- or danger-associated molecular patterns and include identical steps of proteolytic activation of complement component C4, formation of the C3 proconvertase C4b2, followed by cleavage of complement component C2 within C4b2 resulting in the C3 convertase C4b2a.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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