Cynomolgus Complement C2 Protein, His Tag (active enzyme)

Catalog # CO2-C52H8

Synonym

C2,Complement C2,Complement Component C2

Source

Cynomolgus Complement C2, His Tag(CO2-C52H8) is expressed from human 293 cells (HEK293). It contains AA Ala 21 - Leu 752 (Accession # G8F3W0-1). Predicted N-terminus: Ala 21

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 83.0 kDa. The protein migrates as 90-100 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% 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

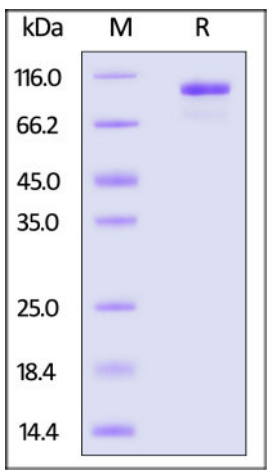
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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



Cynomolgus Complement C2, 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%.

Bioactivity

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