

Synonym

Complement C5,C5,CPAMD4

Source

Rabbit Complement C5, His Tag (CO5-R52H4) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Ala 1678 (Accession # XP_008271599.1).

Predicted N-terminus: Gln 19 (β chain) & Met 678 (α chain)

Molecular Characterization

Complement C5(Gln 19 - Ala 1678)
XP_008271599.1 Poly-his

This protein carries a polyhistidine tag at the C-terminus. The mature form of Complement C5 is a disulfide-linked heterodimer composed of proteolytically cleaved α and β chain. During cultivation, Complement C5 will be partially processed into α and β chain and has a calculated MW of 73.8 kDa (β chain) and 111.9 kDa (α chain) respectively. The protein migrates as 80 kDa (β chain), 120 kDa (α chain) and 200 kDa (α & β chain) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μ g by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

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.

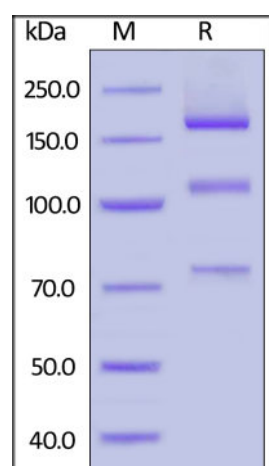
Storage

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

Rabbit Complement C5, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Background

Derived from proteolytic degradation of complement C5, C5 anaphylatoxin is a mediator of local inflammatory process. C5 precursor is first processed by the removal of 4 basic residues, forming two chains, beta and alpha, linked by a disulfide bond. C5 convertase activates C5 by cleaving the alpha chain, releasing C5a

anaphylatoxin and generating C5b (beta chain + alpha' chain). Activation of C5 by a C5 convertase initiates the spontaneous assembly of the late complement components, C5-C9, into the membrane attack complex. C5b has a transient binding site for C6. The C5b-C6 complex is the foundation upon which the lytic complex is assembled. The C5a anaphylatoxin interacts with C5AR1 and tick complement inhibitor. C5a is also a potent chemokine which stimulates the locomotion of polymorphonuclear leukocytes and directs their migration toward sites of inflammation.

References

- (1) [DeMartino JA, et al. 1994. J Biol Chem. 269\(20\):14446-50.](#)
- (2) [Fredslund F, et al. 2008. Nat Immunol. 9\(7\):753-60.](#)
- (3) [Chen Z, et al. 1998. J Biol Chem. 273\(17\):10411-9.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.