

Active Recombinant Rat Complement C5 Protein, His-tagged

Cat. No. C5-11059R **Lot. No.** (See product label)

SPECIFICATION

Product Overview Rat Complement C5, His Tag is expressed from human 293 cells (HEK293). It contains AA Gln 24 - Arg 683 & Asp 684 - Ala 1688 (Accession # XP_001079130.2). This protein carries a polyhistidine tag at the C-terminus. Predicted N-terminus: Gln 24 (β chain) & Asp 684 (α chain)

Species Rat

Source HEK293

ProteinLength 24- 683 aa & 684-1688 aa

Description 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.

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Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.
Bio-activity	Immobilized Rat Complement C5, His Tag at 2 µg/mL (100 µL/well) can bind Anti-C5a (Human IgG1) with a linear range of 0.4-12.5 ng/mL.
Molecular Mass	The mature form of Complement C5 is a disulfide-linked heterodimer composed of proteolytically cleaved α and β chain. Each α and β chain has a calculated MW of 74.1 kDa (β chain) and 114.8 kDa (α chain). The protein migrates as 70 kDa and 110 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU/µg by the LAL method/rFC method.
Purity	>95% as determined by SDS-PAGE.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	C5 complement component 5 [<i>Rattus norvegicus</i>]
Official Symbol	C5

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Synonyms	C5; complement component 5; Hc; C5a;
Gene ID	25397
Protein Refseq	XP_001079130

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