

Recombinant Rat C5 protein, His-tagged

Cat. No. C5-511R Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Rat C5 (Gln24-Ala1688) protein was fused to His-tag at C-terminus and expressed in human 293 cells (HEK293).
Species	Rat
Source	HEK293
ProteinLength	Gln24-Ala1688
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.
Predicted N Terminal	Gln24
Form	Lyophilized from 0.22

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	µm filtered solution in PBS, pH7.4, 10% trehalose.
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 (β chain) and 110 kDa (α chain) 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.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. 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.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	C5
Official Symbol	C5
Synonyms	Hc; C5a; RGD1561905

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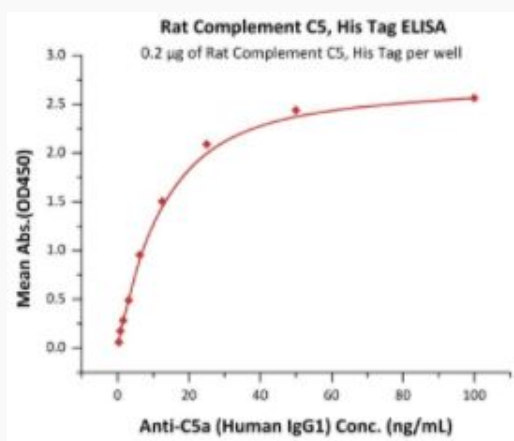
Gene ID 362119

mRNA Refseq NM_053020.1

Protein Refseq NP_444179.1

UniProt ID P08650

**Bioactivity-ELISA of
C5-511R**



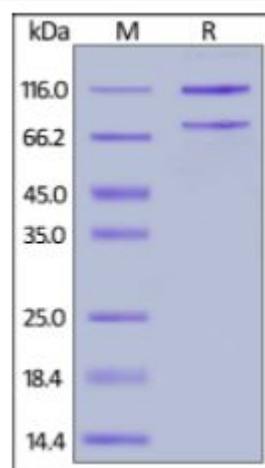
Immobilized Rat Complement C5, His Tag at 2 µg/mL (100 µL/well) can bind Anti-C5a (Human IgG1) with a linear range of 0.4-12.5 ng/mL (QC tested).

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SDS-PAGE of C5-511R



Rat 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 95%.