

# Human CellExp™ Complement C5, Rat Recombinant

**CATALOG NO:** P1468-10 10 µg  
P1468-50 50 µg

**ALTERNATE NAMES:** Complement C5, C5, CPAMD4

**MOL. WT.** 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  $\alpha$  and  $\beta$  chain. Each  $\alpha$  and  $\beta$  chain has a calculated MW of 76.1 kDa ( $\beta$  chain) and 114.8 kDa ( $\alpha$  chain). The protein migrates as 70 kDa ( $\beta$  chain) and 110 kDa ( $\alpha$  chain) under reducing (R) condition (SDS-PAGE) due to glycosylation.

**SOURCE:** HEK 293 cells

**PURITY:** >95% SDS-PAGE

**ENDOTOXIN:** Less than 1.0 EU per µg by the LAL method.

**FORM:** Lyophilized

**FORMULATION:** Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

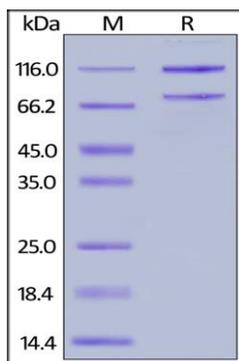
**RECONSTITUTION:** Reconstitute in sterile deionized water to the desired protein concentration.

**SPECIFIC ACTIVITY:** Immobilized Rat Complement C5 at 2 µg/mL (100 µL/well) can bind Anti-C5a with a linear range of 0.4-12.5 ng/mL

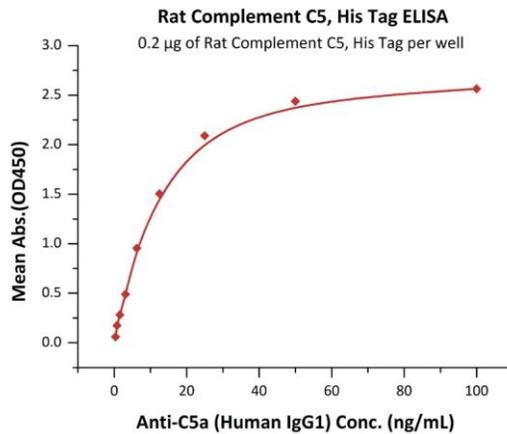
**STORAGE CONDITIONS:** Store at -20°C. After reconstitution, aliquot and store at -70°C and use within 3 months. Avoid repeated freezing and thawing cycles.

**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.

**AMINO ACID SEQUENCE:** Gln 24 - Ala 1688; Predicted N-terminus: Gln 24 ( $\beta$  chain) & Asp 684 ( $\alpha$  chain)



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%.



Immobilized Rat Complement C5 at 2 µg/mL (100 µL/well) can bind Anti-C5a with a linear range of 0.4-12.5 ng/mL

**RELATED PRODUCTS:**

- Complement C5, Human Plasma (P1273)
- C5a, human recombinant (4995B)
- Human CellExp™ Complement C5, Human Recombinant (P1467)
- Human CellExp™ Complement C5a, Mouse recombinant (P1427)
- Human CellExp™ Complement C5, Cynomolgus Recombinant (P1414)

***FOR RESEARCH USE ONLY! Not to be used on humans.***