

Complement C5/C5a Protein, Human (HEK293, His)

Cat. No.:	HY-P700862
Synonyms:	Complement C5; C5; CPAMD4; ECLZB; C5a; C5b; C5D
Species:	Human
Source:	HEK293
Accession:	P01031-1 (Q19-C1676)
Gene ID:	727
Molecular Weight:	110-114 kDa (α chain) & 69-73 kDa (β chain)

PROPERTIES

Biological Activity	Immobilized Human Complement C5, His Tag at 1 $\mu\text{g}/\text{mL}$ (100 $\mu\text{l}/\text{well}$) on the plate. Dose response curve for Anti-Complement C5 Antibody, hFc Tag with the EC_{50} of ≤ 21.4 ng/mL determined by ELISA.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/ μg , determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Upon activation by a C5 convertase, Complement C5 initiates the spontaneous assembly of the late complement components, C5-C9, forming the membrane attack complex. The transient binding site for C6 on C5b is crucial for the foundation of the lytic complex. The proteolytic degradation of complement C5 produces C5a anaphylatoxin, a mediator of local inflammatory processes. C5a interacts with its receptor C5AR1, triggering diverse responses such as intracellular calcium release, smooth muscle contraction, increased vascular permeability, and histamine release from mast cells and basophilic leukocytes. Acting as a potent chemokine, C5a stimulates the locomotion of polymorphonuclear leukocytes and guides their migration toward sites of inflammation, contributing to the orchestration of immune responses.
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Caution: Product has not been fully validated for medical applications. For research use only.

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