Data Sheet (Cat.No.TMPY-03012)

TargetMol

Complement C7 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	complement component 7;Complement C7
Protein Construction:	A DNA sequence encoding the human C7 (P10643) (Met1-Gln843) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P10643
Molecular Weight:	118 kDa (predicted); 118 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Complement component 7 is a component of the complement system. It belongs to the complement C6/C7/C8/C9 family. It contains 1 EGF-like domain, 1 LDL-receptor class A domain, 1 MACPF domain, 2 Sushi (CCP/SCR) domains and 2 TSP type-1 domains. Complement component 7 serves as a membrane anchor. It participates in the formation of Membrane Attack Complex (MAC). People with C7 deficiency are prone to bacterial infection. It is a constituent of MAC that plays a key role in the innate and adaptive immune response by forming pores in the

plasma membrane of target cells. Defects in C7 are a cause of complement component 7 deficiency (C7D). A rare defect of the complement classical pathway associated with susceptibility to severe recurrent infections, predominantly by Neisseria gonorrhoeae or Neisseria meningitidis.

Reference

Bossi F, et al. (2009) C7 is expressed on endothelial cells as a trap for the assembling terminal complement complex and may exert anti-inflammatory function. Blood. 113(15):3640-8.
Kuijpers TW, et al. (2010) Complement factor 7 gene mutations in relation to meningococcal infection and clinical recurrence of meningococcal disease. Mol Immunol. 47(4):671-7.
Thomas AD, et al. (2012) Characterization of a large genomic deletion in four Irish families with C7 deficiency. Mol Immunol. 50(1-2):57-9.