

# Recombinant Human C2/Complement Component 2 Protein (Fc Tag)



Catalog Number:PKSH031829

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

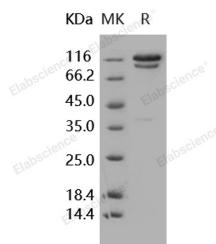
## Description

|                             |               |
|-----------------------------|---------------|
| Synonyms                    | ARMD14;CO2    |
| Species                     | Human         |
| Expression Host             | HEK293 Cells  |
| Sequence                    | Met 1-Leu 752 |
| Accession                   | NP_000054.2   |
| Calculated Molecular Weight | 110 kDa       |
| Observed molecular weight   | 110-130 kDa   |
| Tag                         | C-hFc         |

## Properties

|                |   |
|----------------|---|
| Purity         | > 95 % as determined by reducing SDS-PAGE.  |
| Endotoxin      | < 1.0 EU per $\mu$ g of the protein as determined by the LAL method.  |
| Storage        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| Formulation    | Lyophilized from sterile PBS, pH 7.4<br>Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.            |
| Reconstitution | Please refer to the printed manual for detailed information.  |

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

Complement component C2 is part of the classical complement pathway which plays a major role in innate immunity against infection. C2 is a glycoprotein synthesized in liver hepatocytes and several other cell types in extrahepatic tissues. This pathway is triggered by a multimolecular complex C1, and subsequently the single-chain form of C2 is cleaved into two chains referred to C2a and C2b by activated C1. The second component of complement (C2) is a multi-domain serine protease that provides catalytic activity for the C3 and C5 convertases of the classical and lectin pathways of human complement. C4b and C2 was investigated by surface plasmon resonance. C2a containing a serine protease domain combines with complement component C4b to form the C3 convertase C4b2a which is responsible for C3 activation, and leads to the stimulation of adaptive immune responses via Lectin pathway. C2 bound to C4b is cleaved by classical (C1s)

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or lectin (MASP2) proteases to produce C4bC2a. C2 has the same serine protease domain as C4bC2a but in an inactive zymogen-like conformation, requiring cofactor-induced conformational change for activity. Deficiency of C2 (C2D) is the most common genetic deficiency of the complement system, and two types of C2D have been recognized in the context of specific MHC haplotypes. C2D in human is reported to increase susceptibility to infection, and is associated with certain autoimmune diseases, such as rheumatological disorders.

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