For Research Use Only

Recombinant Mouse Cfd protein (rFc Tag)

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Catalog Number: Eg3077

Basic Information

Species:
Mouse

Purity:
>90 %, SDS-PAGE

Tag:
rFc Tag

Technical Specifications

Purity:
>90 %, SDS-PAGE

Endotoxin Level:
<0.1 EU/μg protein, LAL method

Source:
HEK293-derived Mouse Cfd protein Gln21-Ser259 (Accession# P03953-1) with a rabbit IgG Fc tag at the C-terminus.

GeneID:
11537

Accession:
P03953-1

Predicted Molecular Mass:
52.1 kDa

SDS-PAGE:
60-75 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

Cfd is a crucial component of the complement system, playing a significant role in host defense and immune regulation. The protein encoded by the Cfd gene is a member of the chymotrypsin family of serine proteases. It plays an essential role in host defense as the rate-limiting enzyme in the alternative pathway of complement activation. Complement factor D activates a convertase (C3bBb) responsible for cleavage of the complement protein C3, which leads to the activation of terminal complement component C5-9 to form the membrane attack complex on microbial or cellular surfaces. Cfd knockout mice display impaired alternative pathway activation of the complement system and increased susceptibility to pneumococcal infection. These mice have a defect in the activation of the alternative pathway, leading to a reduced ability to clear pathogens. Mouse models have been used to study the function of Cfd in various disease states, and its human ortholog CFD is a promising candidate for the development of therapeutic strategies for metabolic and inflammatory diseases.

References

1. Wang L, Gao P, et al. (2023) J Cachexia Sarcopenia Muscle. 14(5):2152-2167.
2. Cho M, Hwang JS, et al. (2024) Int J Mol Sci. 25(18):9877.
3. Ito S, Hashimoto H, et al. (2022) Nat Commun. 13(1):5409.
4. Ma L, Gilani A, et al. (2024) JCI Insight. 9(11):e178925.

Synonyms

Complement factor D, 28 kDa adipocyte protein, Adipsin, Adn, C3 convertase activator

For technical support and original validation data for this product please contact

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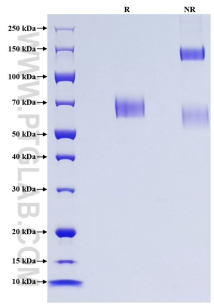
Selected Validation Data



Purity of Recombinant Mouse Cfd was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.