For Research Use Only

Recombinant Mouse ORM1 protein (rFc Tag) (HPLC verified)

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Catalog Number: Eg2752

Basic Information

Species:
Mouse

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

Tag:
rFc Tag

Technical Specifications

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

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

Source:
HEK293-derived Mouse ORM1 protein Gln19-Ala207 (Accession# Q60590) with a rabbit IgG Fc tag at the C-terminus.

GeneID:
18405

Accession:
Q60590

Predicted Molecular Mass:
48.0 kDa

SDS-PAGE:
50-70 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℃ to -80℃ as lyophilized proteins.
- 3 months, -20℃ to -80℃ 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

Orosomucoid 1 (ORM1) is an acute-phase protein that is primarily expressed by hepatocytes under stress conditions, such as during inflammation, injury, or infection. It is a member of the lipocalin family and is known for its immunomodulatory properties, including the ability to inhibit neutrophil chemotaxis, superoxide production, lymphocyte proliferation, and platelet aggregation. ORM1 also has the capacity to interfere with cytokine function by inducing the secretion of soluble TNF α receptor (sTNFR) and IL-1 receptor antagonist (IL1-Ra). In mice, ORM1 plays a significant role in liver regeneration. Transcriptome analysis has revealed that ORM1 is mostly induced in hepatocytes as a regulator of mouse liver regeneration. Knockdown of ORM1 in mice has been shown to impair liver regeneration, with poor hepatocyte growth and suppressed cell cycle signaling. This suggests that ORM1 is not only a marker of acute-phase response but also a functional protein that contributes to the regenerative process of the liver.

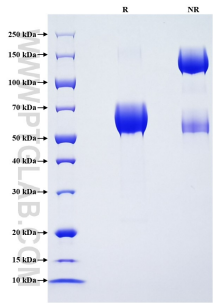
References

1. Xian-Yang Qin. et al. (2017). EBioMedicine. 24:257-266.
2. Giovanni Ligresti. et al.(2012). PLoS One.7(8):e41387.
3. Lei Yue. et al. (2023). Sci Rep. 13(1):14092.

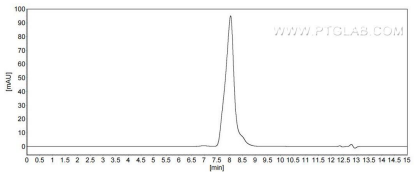
Synonyms

AGP 1, Agp1, Alpha-1-acid glycoprotein 1, OMD 1, Orm-1

Selected Validation Data



Purity of Recombinant Mouse ORM1 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.



The purity of Mouse ORM1 was greater than 90% as determined by SEC-HPLC.