



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD55 Protein
Catalog Number: hRP-0381
Manufacturer: LD Biopharma, Inc.

Introduction

Human CD55 encodes a protein involved in the regulation of the complement cascade. The encoded glycoprotein is also known as the decay-accelerating factor (DAF); binding of DAF to complement proteins accelerates their decay, disrupting the cascade and preventing damage to host cells. Antigens present on the DAF glycoprotein constitute the Cromer blood group system (CROM). Two alternatively spliced transcripts encoding different proteins have been identified. The predominant transcript encodes a membrane-bound protein expressed on cells exposed to plasma component proteins but an alternatively spliced transcript produces a soluble protein present at much lower levels.

Recombinant human CD55 (Isoform-1) extracellular domain cDNA (35-353 aa fragment) was constructed with codon optimization and expressed with small T7 Tag (29aa) fusion at its N-terminal and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Coating this recombinant protein at 5-10 ug / well (6 well plate) in a specific culture medium can be used for human red blood cell differentiation study in vitro.

Gene Symbol: CD55 (CR; CROM; DAF; TC)
Accession Number: NP_000565
Species: Human
Size: 100 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

Key References

Kim, Y., et al. *Quantitation of CD55 and CD59 expression on reticulocytes and mature erythrocytes in paroxysmal nocturnal hemoglobinuria, aplastic anemia, and healthy control subjects* Ann. Clin. Lab. Sci. 40 (3), 226-232 (2010)

Alegretti, A.P., et al. *Expression of CD55 and CD59 on peripheral blood cells from systemic lupus erythematosus (SLE) patients*. Cell. Immunol. 265 (2), 127-132 (2010)

Applications

1. Protein can be used as coating matrix protein for study human red blood cell differentiation regulation in vitro.
2. Potential biomarker protein for auto-immune disease diagnostic development.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Functional Test: Not tested yet.

Coating Protocol

Add 1 ml PBS per well, then add 5-10 ug coating protein per well, incubate at 4°C overnight. After coating, remove PBS solution, the plate is ready for cell culture study.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESF
VKIPGEKDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVEYECRPGY
RREPSLSPKLTCLQNLKWSTRAVEFCKKKSCPNGEIRNGQIDVPGGILFGATISFSCNTGYKLF
GSTSSFCLISGSSVQWSDPLPECREIYCPAPPQIDNGIIQGERDHYGYRQSVTYACNKGFTMIG
EHSIYCTVNNDEGEWSPPEPCRKSLTSKVPPTVQKPTTVNVPTTEVSPTSQKTTTTPNA
QATRSTPVSRTTKHFHETTPNKSGTTS