



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD235a Protein
Catalog Number: HRP-2393
Manufacturer: LD Biopharma, Inc.

Introduction

Human Glycophorin A gene (also named as CD235a) encodes a major intrinsic membrane protein of the erythrocyte. The N-terminal glycosylated segment, which lies outside the erythrocyte membrane, has MN blood group receptors. Appears to be important for the function of **SLC4A1** (CD233) and is required for high activity of SLC4A1. CD235a may be involved in translocation of SLC4A1 to the plasma membrane. Is a receptor for influenza virus. It is also a receptor for Plasmodium falciparum erythrocyte-binding antigen 175 (EBA-175); binding of EBA-175 is dependent on sialic acid residues of the O-linked glycans. Appears to be a receptor for Hepatitis A virus (HAV).

Full-length extracellular domain of human CD235a cDNA (20 – 91aa, derived from BC005319) was constructed with codon optimization gene synthesis and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CD235a (GYPa; PGA)
Accession Number: NP_002090.4
Species: Human
Size: 50 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, Sucrose, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References



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Sturgeon CM, et al. *Wnt signaling controls the specification of definitive and primitive hematopoiesis from human pluripotent stem cells*. Nat Biotechnol. 32:554-61. (2014)

Sisquella X, et al., *Plasmodium falciparum ligand binding to erythrocytes induce alterations in deformability essential for invasion*. Elife 6, e21083 (2017)

Giger K, et al., *Diffusion of glycophorin A in human erythrocytes* Biochim. Biophys. Acta 1858 (11), 2839-2845 (2016)

Applications

1. May be used for in vitro CD235a mediated erythrocyte proliferation and differentiation or HSC differentiation regulation study with this recombinant CD235a protein either as soluble factor or as coating matrix protein.
2. May be used for CD235a protein-protein interaction assay.
3. As CD235a immunogen for specific antibody production.

Quality Control

Purity: > 93% by SDS-PAGE.

Recombinant Human **AFPn**- CD235a Fusion Protein Sequence (32.5 kD)

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQ~~EA~~TYKEVSKMVKDALTAEKPTGDEQ
SSGCLLENQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNF~~FI~~YEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHGSENLYFQGLSTTEVAMHTSTSSSVTKSYISSQTNDTHKRDTYAATPR
AHEVSEISVRTVYPPEEETGERVQLAHHFSEPE