Data Sheet (Cat.No.TMPY-02702)

TargetMol

ASGR1 Protein, Human, Recombinant (His)

General Information

Synonyms: ASGPR1;CLEC4H1;ASGPR;HL-1;asialoglycoprotein receptor 1

Protein Construction: Gln62-Leu291

Species: Human

Expression Host: HEK293 Cells

Accession: P07306

Molecular Weight: 28.8 kDa (predicted); 38-55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90% as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The asialoglycoprotein receptor (ASGPR), an endocytotic cell surface receptor expressed by hepatocytes, is triggered by triantennary binding to galactose residues of macromolecules such as asialoorosomucoid (ASOR). ASGPR belongs to the long-form subfamily of the C-type/Ca2+ dependent lectin family. It is a complex of two noncovalently-linked and highly homologous subunits, a major 42 kDa glycoprotein ASGPR1(MHL-1) and a minor

51 kDa glycoprotein ASGR2 (MHL-2). ASGPR1 is synthesized as a type II transmembrane protein that contains a cytosolic N-terminal domain, a single transmembrane segment, and an extracellular domain which contains two important structural regions. The first is a stalk domain that contributes to noncovalent oligomerization, and the second is a Ca2+-dependent carbohydrate binding domain at the very C-terminus that is unusually stabilized by three ions. The research regarded that ASGPR1 could be targeted for anti- hepatitis B virus (HBV) drug development.

Reference

Yang J,et al.(2006) Antisense oligonucleotides targeted against asialoglycoprotein receptor 1 block human hepatitis B virus replication. J Viral Hepat. 13(3): 158-65.
Li Y,et al.(2008) Targeted delivery of macromolecular drugs: asialoglycoprotein receptor (ASGPR) expression by selected hepatoma cell lines used in antiviral drug development. Curr Drug Deliv. 5(4): 299-302.