Data Sheet (Cat.No.TMPY-00131)

TargetMol

Niemann Pick C1/NPC1 Protein, Human, Recombinant (His & FLAG)

General Information

Synonyms: NPC;Niemann-Pick disease, type C1

Protein Construction: A DNA sequence encoding the human NPC1 (NP_000262.2) (Arg372-Phe622) was expressed with a N-terminal polyhistide-tagged FLAG tag at the N-terminus (his-FLAG). Predicted N terminal: His

Species: Human

Expression Host: HEK293 Cells

Accession: O15118

Molecular Weight: 32 kDa (predicted)

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: > 95 % 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Niemann-Pick C1 (NPC1), a host receptor involved in the envelope glycoprotein (GP)-mediated entry of filoviruses into cells, is believed to be a major determinant of cell susceptibility to filovirus infection. Niemann-Pick C1 (NPC1), a membrane protein of lysosomes, is required for the export of cholesterol derived from receptor-mediated endocytosis of LDL. The NPC1 protein is a multipass transmembrane protein whose deficiency causes the

autosomal recessive lipid storage disorder Niemann-Pick type C1. NPC1 localizes predominantly to late endosomes and has a dileucine motif located within a small cytoplasmic tail thought to target the protein to this location. Niemann-Pick disease type C1 (NPC1) is a rare progressive neurodegenerative disorder caused by mutations in the NPC1 gene. On the cellular level, NPC1 mutations lead to an accumulation of cholesterol and gangliosides.

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