Data Sheet (Cat.No.TMPY-00264)

TargetMol

NPC2 Protein, Rat, Recombinant (His)

General Information

Synonyms:	Niemann-Pick disease, type C2
Protein Construction:	A DNA sequence encoding the rat Npc2 (CAD56199.1) (Met1-Gly152) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 23
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q8CHN5
Molecular Weight:	15.9 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 Type C2 (NPC2) plays an important role in the regulation of intracellular cholesterol homeostasis via direct binding with free cholesterol. NPC2 is an intralysosomal protein that binds cholesterol in vitro. NPC2 is a small lysosomal glycoprotein that binds cholesterol with submicromolar affinity. Deficiency in NPC2 is the cause of Niemann-Pick type C2 disease, a fatal neurovisceral disorder characterized by the accumulation of cholesterol in lysosomes. Niemann-Pick disease, type C2 (NPC2) protein is one of the most abundant components of the

epididymal fluid and contains a functional cholesterol-binding site that can transfer cholesterol between membranes, it has been suggested for years that NPC2 could be involved in the regulation of cholesterol levels in spermatozoa during epididymal maturation.

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