Human Niemann-Pick Type C2 / NPC2 Protein, His Tag

Catalog # NP2-H52H1

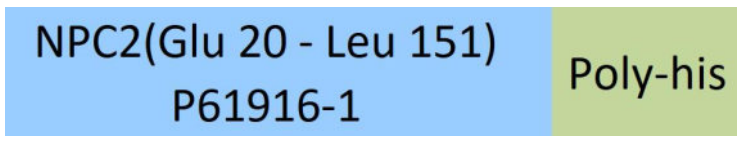
Synonym

NPC2,HE1

Source

Human NPC2, His Tag (NP2-H52H1) is expressed from human 293 cells (HEK293). It contains AA Glu 20 - Leu 151 (Accession # P61916-1). Predicted N-terminus: Glu 20

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 16.5 kDa. The protein migrates as 21 kDa and 24-27 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

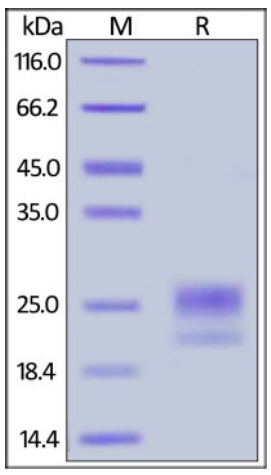
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human NPC2, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Background

Niemann-Pick disease type C2 protein (NPC2) is also known as epididymal secretory protein E1 and human epididymis-specific protein 1 (HE1). NPC2 is a intracellular cholesterol transporter which acts in concert with NPC1 and plays an important role in the egress of cholesterol from the endosomal/lysosomal compartment. Both NPC1 and NPC2 function as the cellular 'tag team duo' (TTD) to catalyze the mobilization of cholesterol within the multivesicular environment of the late endosome (LE) to effect egress through the limiting bilayer of the LE. Also,NPC2 binds unesterified cholesterol that has been released from LDLs in the lumen of the late endosomes/lysosomes and transfers it to the cholesterol-binding pocket of the N-terminal domain of NPC1. Furthermore,the secreted form of NCP2 regulates biliary cholesterol secretion via stimulation of ABCG5/ABCG8-mediated cholesterol transport.

References

(1) Liou H.L., et al., 2006, J. Biol. Chem. 281:36710-36723.

(2) Xu Z., et al., 2008, Biochemistry 47:11134-11143.

(3) Yamanashi Y., et al., 2012, Hepatology 55:953-964.

(4) Millat G., et al., 2005, Mol. Genet. Metab. 86:220-232.

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.