Recombinant NPC2 protein (His tag)

Catalog Number	544757
Synonyms	Epididymal secretory protein E1; Human epididymis-specific protein 1; He1; Niemann-Pick disease type C2 protein
Species	Human
Expression System	E. coli
Accession	P61916
Molecular Weight	Predictes a molecular mass of 16.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	20-151
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 20-151 aa (P61916) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human NPC2 (20-151) is a highly purified protein fragment representing the core functional domain of NPC intracellular cholesterol transporter 2. This 132-amino acid fragment maintains the cholesterol-binding capability of the full-length protein, making it an ideal tool for studying lysosomal cholesterol transport mechanisms and Niemann-Pick disease research. NPC intracellular cholesterol transporter 2 (NPC2) is a crucial intracellular cholesterol transporter that functions in concert with NPC1 to facilitate cholesterol egress from lysosomal compartments. The protein binds unesterified cholesterol released from LDLs in late endosomes/lysosomes with 1:1 stoichiometry and transfers it to NPC1's cholesterol-binding pocket. NPC2 demonstrates broad sterol-binding specificity, interacting with various sterols including lathosterol, desmosterol, and plant sterols. The protein localizes to multiple cellular compartments including lysosomes, endoplasmic reticulum, and is also secreted, where it regulates biliary cholesterol secretion through stimulation of ABCG5/ABCG8-mediated cholesterol transport. Its critical role in cholesterol homeostasis makes it essential for understanding Niemann-Pick disease type C2 and broader cholesterol metabolism pathways.