Recombinant ABCD4 protein (His tag)

Catalog Number	546422
Synonyms	ATP-binding cassette sub-family D member 4; PMP70-related protein; P70R; Peroxisomal membrane protein 1-like; PXMP1-L; Peroxisomal membrane protein 69; PMP69
Species	Human
Expression System	E. coli
Accession	O14678
Molecular Weight	Predictes a molecular mass of 31.92 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	335-606
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 335-606 aa (O14678) 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	This recombinant protein product features a 272-amino acid fragment (residues 335-606) of the human Lysosomal Cobalamin Transporter ABCD4, encompassing its essential ABC transporter domain. It serves as a valuable tool for researchers investigating the ATP-dependent transport mechanisms of cobalamin (Vitamin B12) across lysosomal membranes, enabling focused studies on domain-specific functions without the complexities of the full-length membrane protein. The full-length ABCD4 protein, also known as ATP-binding cassette sub-family D member 4, is a lysosomal membrane transporter critical for the ATP-dependent efflux of cobalamin (Vitamin B12) from the lysosomal lumen to the cytosol. This process is essential for cellular vitamin B12 metabolism and is facilitated through a complex with lysosomal chaperone LMBRD1 and cytosolic MMACHC. ABCD4 is initially localized to the endoplasmic reticulum membrane and is subsequently chaperoned by LMBRD1 to the lysosomal membrane, where it functions as a multi-pass membrane protein. Its role in cobalamin transport highlights its significance in nutrient processing and cellular homeostasis, with implications for understanding lysosomal storage disorders and vitamin B12-related metabolic pathways.