Recombinant ABCD2 protein (His tag)

Catalog Number	548441
Synonyms	Adrenoleukodystrophy-like 1; Adrenoleukodystrophy-related protein; hALDR
Species	Human
Expression System	E. coli
Accession	Q9UBJ2
Molecular Weight	Predictes a molecular mass of 43.28 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	372-740
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 372-740 aa (Q9UBJ2) 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 ABCD2 Protein Fragment (residues 372-740) - a high-purity preparation containing the essential ABC transporter domain (residues 478-704) of ATP-binding cassette sub-family D member 2. This fragment serves as an ideal tool for investigating the specific transport functions and ATPase activities of this critical peroxisomal transporter involved in fatty acid metabolism. The full-length ABCD2 protein, also known as Adrenoleukodystrophy-related protein (hALDR), functions as an ATP-dependent transporter within the ATP-binding cassette family. It plays a crucial role in transporting very long chain fatty acid (VLCFA)-CoA from the cytosol into peroxisomes, where fatty acid beta-oxidation occurs. ABCD2 exhibits distinct substrate preferences for shorter VLCFAs and polyunsaturated fatty acids compared to related transporters, positioning it as a key regulator in fatty acid metabolism and energy homeostasis. The protein is localized to the peroxisome membrane as a multi-pass membrane protein, where it may also demonstrate fatty acyl-CoA thioesterase activity, facilitating the hydrolysis and subsequent transport of VLCFAs in an ATP-dependent manner.