

Recombinant Human ABCD2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50009

Size: 10ug, 100ug

Protein Name: ATP-binding cassette sub-family D member 2 (EC 3.1.2.-) (EC 7.6.2.-) (Adrenoleukodystrophy-like 1) (Adrenoleukodystrophy-related protein) (hALDR)

Synonym: ABCD2, ALD1, ALDL1, ALDR, ALDRP

UniProt ID: Q9UBJ2

UniProt Link: www.uniprot.org/uniprotkb/Q9UBJ2/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 740 AA

Molecular Weight: 83 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTHMLNAAADRVKWTRSSAAKRAACLVAAYALKTLPIIGKRLKQSGHGKKKAAAYPAAENTEILH
CTETICEKPSPGVNADFFKQLLELRKILFPKLVTTETGWLCLHSVALISRTFLSIYVAGLDGKIVKSIVEK
KPRTFIIKLIKWLMAIPATFVNSAIRYLECKLALAFRTLVDHAYETYFTNQTYKVINMDGRLANPDQ
SLTEDIMMFSQSVAHLYSNLTKPILDVMLTSYTLIQTATSRGASPIGPTLLAGLVVYATAKVLKACSPK
FGKLVAAEEAHRKGYLRYVHSRIIANVEEIAFYRGHKVEMKQLQKSYKALADQMNLILSKRLWYIMIEQ
FLMKYVWSSSGLIMVAIPIITATGFADGEDGQKQVMVSETEAFTTARNLLASGADAIERIMSSYKEV
TELAGYTARVYNMFVWFDEVKRGYKRTAVIQESESESHKNGAKVELPLSDTLAIKGKVIDVDHGIICEN
VPIITPAGEVVASRLNFKVEEGMHLLITGPNCGCKSSLFRILSGLWPVYEGVLYKPPPQHMFYIPQRP
YMSLGSRLRDQVIYPDSVDDMHDKGYTDQDLERILHNVHLYHIVQREGGWDVMDWKDVLSGGEKQ
RMGMARMFYHKPKYALLDECTSAVSIDVEGKIFQAAKGAGISLLSITHRPSLWKYHTHLLQFDGEGG
WRFEQLDTAIRLTLSEEKQKLESQLAGIPKMQRNLCKILGEDSVLKTIKNEDETS

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant ATP-binding cassette sub-family D member 2 (EC 3.1.2.-) (EC 7.6.2.-) (Adrenoleukodystrophy-like 1) (Adrenoleukodystrophy-related protein) (hALDR) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: ATP-dependent transporter of the ATP-binding cassette (ABC) family involved in the transport of very long chain fatty acid (VLCFA)-CoA from the cytosol to the peroxisome lumen (PubMed:21145416, PubMed:29397936). Like ABCD1 seems to have fatty acyl-CoA thioesterase (ACOT) and ATPase activities, according to this model, VLCFA-CoA as free VLCFA is transported in an ATP-dependent manner into peroxisomes after the hydrolysis of VLCFA-CoA mediated by the ACOT activity of ABCD2 (Probable) (PubMed:29397936). Shows overlapping substrate specificities with ABCD1 toward saturated fatty acids (FA) and monounsaturated FA (MUFA) but has a distinct substrate preference for shorter VLCFA (C22:0) and polyunsaturated fatty acid (PUFA) such as C22:6-CoA and C24:6-CoA (in vitro) (PubMed:21145416). Thus, may play a role in regulation of VLCFAs and energy metabolism namely, in the degradation and biosynthesis of fatty acids by beta-oxidation (PubMed:21145416).

Subcellular Localization: Peroxisome membrane ; Multi-pass membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.