

## Product datasheet for **RC206885**

### **ABCD1 (NM\_000033) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ABCD1 (NM_000033) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ABCD1
Synonyms:	ABC42; ALD; ALDP; AMN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC206885 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCGGTGTCTCCAGGCCCGGCCCTGGCGGGGAACACGCTGAAGCGCACGGCCGTCTCTGGCCC  
 TCGCGGCTATGGAGCCACAAAGTCTACCCCTTGGTGCGCCAGTGCCTGGCCCCGGCCAGGGGTCTTCA  
 GCGCCCCCGGGGAGCCACGCAGGAGCCTCCGGGGTGCGGCGGCCAAAGCTGGCATGAACCGGTA  
 TTCCTGCAGCGGCTCCTGTGGCTCTGCGGCTGTGTTCCCCGGGTCTGTGCCGGGAGACGGGGTCTG  
 TGGCCCTGCACTCGGCCCTTGGTGGCCGACCTTCTGTGCGTGTATGTGGCCCGCTGGACGGAAG  
 GCTGGCCCGTGCATCGTCCGAAGGACCCGGGGCTTTGGTGGCAGCTGCTGCAGTGGCTCCTCATC  
 GCCCTCCCTGCTACCTTCGTCAACAGTCCATCCGTTACCTGGAGGGCCAACTGGCCCTGCTGTTCCGCA  
 GCCGTCTGGTGGCCACGCTACCGCCTCTACTTCTCCAGCAGACCTACTACCGGTGACGCAACATGGA  
 CGGGCGGCTTCGCAACCCTGACCACTCTGACGGAGGACGTGGTGGCCCTTTCGGCCCTCTGTGGCCAC  
 CTCTACTCCAACCTGACCAAGCCACTCCTGGACGTGGCTGTGACTTCTACACCCCTGCTTCGGGCGGCC  
 GCTCCCGTGGAGCCGGCACAGCCTGGCCCTCGGCCATCGCCGGCCTCGTGGTGTCTCACGGCCAACT  
 GCTGCGGGCTTCTCGCCAAAGTTCGGGGAGCTGGTGGCAGAGGAGGCGGGCGGAAGGGGGAGCTGCGC  
 TACATGCACTCGCGTGTGGTGGCCAACCTCGGAGGAGATCGCCTTCTATGGGGGCCATGAGGTGGAGCTGG  
 CCCTGTACACGCTCCTACCAGGACCTGGCCTCGCAGATCAACCTCATCCTTCTGGAACGCTGTGGTA  
 TGTTATGTGGAGCAGTTCCTCATGAAGTATGTGTGGAGCGCCTCGGGCTGCTCATGGTGGCTGTCCCC  
 ATCATCACTGCCACTGGTACTCAGAGTCAGATGCAGAGGCCGTGAAGAAGGCAGCCTTGGAAAAGAAGG  
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 TGCCATTGAGCGGATCATGTCTGTGTAACAAGGAGGTGACGGAGCTGGCTGGCTACACAGCCCGGGTGCAC  
 GAGATGTTCCAGGTATTTGAAGATGTTACGCGCTGCACTTCAAGAGGCCAGGGAGCTAGAGGACGCTC  
 AGCGGGGTCTGGGACCATAGGCCGGTCTGGTGTCCGTGTGGAGGGCCCCCTGAAGATCCGAGGCCAGGT  
 GGTGGATGTGGAACAGGGGATCATCTGCGAGAACATCCCCATCGTCACGCCCTCAGGAGAGGTGGTGGT  
 GCCAGCCTCAACATCAGGGTGGAGGAAGGCATGCATCTGCTCATCACAGGCCCAATGGCTGCGGCAAGA  
 GCTCCCTGTTCCGGATCCTGGTGGGCTCTGGCCACGTACGGTGGTGTGCTCTACAAGCCCCACCCCA  
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 GACTCAGTGGAGGACATGCAAAGGAAGGGCTACTCGGAGCAGGACCTGGAAGCCATCCTGGACGTCTGTC  
 ACCTGCACCACATCCTGCAGCGGAGGGAGGTTGGGAGGCTATGTGTGACTGGAAGGACCTCTGTGCGG  
 TGGCGAGAAGCAGAGAATCGGCATGGCCCGCATGTTCTACCACAGGCCCAAGTACGCCCTCCTGGATGAA  
 TGCACCAGCGCCGTGAGCATCGACGTGGAAGGCAAGATCTCCAGGCGGCCAAGGACGCGGGCATTGCC  
 TGCTCTCCATACCCACCGGCCCTCCCTGTGGAATACCACACACTTGTACAGTTTCATGGGGAGGG  
 CGGCTGGAAGTTCGAGAAGCTGGACTCAGCTGCCCGCCTGAGCCTGACGGAGGAGAAGCAGCGGCTGGAG  
 CAGCAGCTGGCGGGCATTCCAAGATGCAGCGGCGCCTCCAGGAGCTCTGCCAGATCCTGGGCGAGGCCG  
 TGGCCCCAGCGCATGTGCCGGCACCTAGCCCGCAAGGCCCTGGTGGCTCCAGGGTGCCTCCACC

**ACGCGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC206885 protein sequence  
 Red=Cloning site Green=Tags(s)

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MPVL SRPRPWRGNTLKRTAVLLALAAAYGAHKVYPLVRQCLAPARGLQAPAGEPTQEASGVAAAKAGMNRV
FLQRLWLRLFPVLCRETGLLALHSAALVSRFTFLSVYVARLDGRLARCVRKDPRAFGWQLLQWLLI
ALPATFVNSAIRYLEGQLALSFRSRLVAHAYRLYFSQQTYYRVSNDGRLRNPQSLTEDVVAFAASVAH
LYSNLTKPLLDVAVTSYLLRAARSRGAGTAWPSAIAGLVVFLTANVLRASFSPKFGELVAEEARRKGELR
YMHSRVVANSEEIAFYGGHEVELALLQRSYQDLASQINLILLERLWYVMLEQFLMKYVWSASGLLMVAVP
IITATGYSESDAEAVKKALEKKEEELVSETEAFTIARNLLTAAADAIERIMSSYKEVTELAGYARVH
EMFQVQFEDVQRCHFKRPRELEDAQAGSGTIGRSGVRVEGPLKIRGQVVDVEQGIICENIPIVTPSGEVVV
ASLNIRVEEGMHLLITGPNCGKSSFLRILGGLWPTYGGVLYKPPPQRMFYIPQRPYMSVGLRDQVIYP
DSVEDMQRKGYSEQDLEAILDVLVHLHHILQREGGWEAMCDWKDVLSGGEKQRIGMARMFYHRPKYALLDE
CTSAVSIDVEGKIFQAAKDAGIALLSITHRPSLWKYHHTLLQFDGEGGWKFEKLDSAARLSL TEEKQRLE
QQLAGIPKMQRRLQELCQILGEAVAPAHVPAPSPQGGGLQGAST
  
```

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6261\\_b05.zip](https://cdn.origene.com/chromatograms/mk6261_b05.zip)

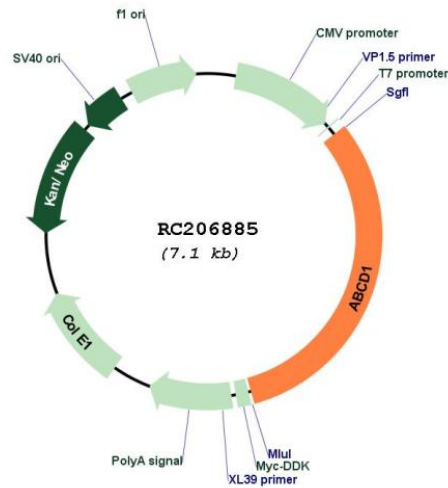
**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_000033

**ORF Size:** 2235 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_000033.4](#)

**RefSeq Size:** 3697 bp

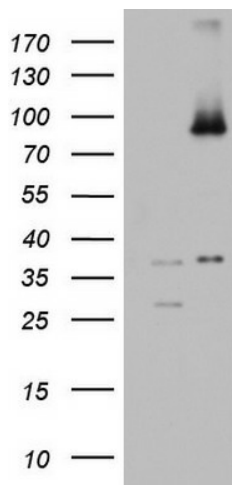
**RefSeq ORF:** 2238 bp

**Locus ID:** 215

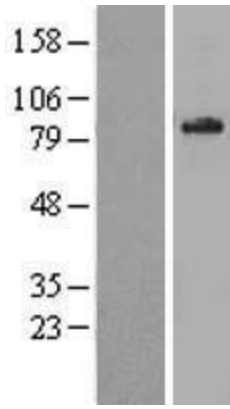
**UniProt ID:** [P33897](#)

<b>Cytogenetics:</b>	Xq28
<b>Domains:</b>	ABC_tran, AAA
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	ABC transporters
<b>MW:</b>	82.9 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the ALD subfamily, which is involved in peroxisomal import of fatty acids and/or fatty acyl-CoAs in the organelle. All known peroxisomal ABC transporters are half transporters which require a partner half transporter molecule to form a functional homodimeric or heterodimeric transporter. This peroxisomal membrane protein is likely involved in the peroxisomal transport or catabolism of very long chain fatty acids. Defects in this gene have been identified as the underlying cause of adrenoleukodystrophy, an X-chromosome recessively inherited demyelinating disorder of the nervous system. [provided by RefSeq, Jul 2008]</p>

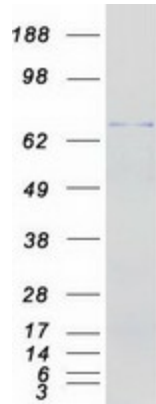
### Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ABCD1 (Cat# RC206885, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ABCD1 (Cat# [TA803208]). Positive lysates [LY424967] (100ug) and [LC424967] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424967]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206885 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ABCD1 protein (Cat# [TP306885]). The protein was produced from HEK293T cells transfected with ABCD1 cDNA clone (Cat# RC206885) using MegaTran 2.0 (Cat# [TT210002]).