

Product datasheet for **RC211199**

ABCD2 (NM_005164) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ABCD2 (NM_005164) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ABCD2
Synonyms:	ABC39; ALDL1; ALDR; ALDRP; hALDR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC211199 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGACACATATGCTAAATGCAGCAGCTGATCGAGTGAAATGGACCAGATCGAGTGTCTAAGAGGGCTG
CCTGCCTGGTGGCTGCGGCATATGCTCTGAAAACCCTCTATCCCATCATTGGCAAGCGTTTAAAGCAATC
TGGCCACGGGAAGAAAAAGCAGCAGCTTACCCTGCTGCAGAGAACACAGAAATACTGCATTGCACCGAG
ACCATTTGTGAAAAACCTTCGCCTGGAGTGAATGCAGATTTCTTCAAACAGCTACTAGAACTTCGGAAAA
TTTTGTTTCCAAAACCTTGTGACCACTGAAACAGGGTGGCTCTGCCTGCACTCAGTGGCTCTAATCTCAAG
AACCTTTCTTCTATCTATGTGGCTGGTCTGGATGGAAAAATCGTAAAAGCATTGTGAAAAAGAAGCCT
CGGACTTTCATCATCAAATTAATCAAGTGGCTTATGATTGCCATCCCTGCTACCTTCGTCAACAGTGCAA
TAAGGTACCTGGAATGCAAATTTGGCTTTGGCTTCAGAACTCGCCTAGTAGACCACGCCTATGAAACCTA
TTTTACAATCAGACTTATTATAAAGTGATCAATATGGATGGGAGGCTGGCAAACCTGACCAATCTCTT
ACGGAGGATATTATGATGTTCTCCAATCTGTGGCTCACTTGTATTCCAATCTGACCAAACTATTTTAG
ATGTAATGCTGACCTCCTATACACTCATTCAAACCTGCTACATCCAGAGGAGCAAGCCCAATTGGGCCAC
CCTACTAGCAGGACTTGTGGTGTATGCCACTGCTAAAAGTGTAAAAGCCTGTTCTCCCAATTTGGCAAA
CTGGTGGCAGAGGAAGCAGATAGAAAAGGCTATTTGCGGTATGTGCACTCGAGAATTATAGCCAATGTAG
AAGAAATTGCCTTTACAGAGGACATAAGGTAGAAATGAAACAACCTCAGAAAAGTTACAAAAGCTTTAGC
AGATCAGATGAACCTCATTTTATCCAAACGTTTGTGGTACATCATGATAGAACAGTTCCTGATGAAGTAT
GTTTGGAGCAGCAGTGGACTAATTATGGTGGCTATACCTATTACTGCAACTGGCTTTGCAGATGGTG
AGGATGGCCAAAAGCAAGTTATGGTTAGTGAACGGACAGAAAGCCTTTACCACTGCTCGAAATTTACTGCC
CTCTGGAGCTGATGCTATTGAAAGGATTATGTCTTCATACAAAGAGGTCCTGAATTAGCAGGCTACACT
GCTCGAGTGTAACAATATGTTTTGGGCTTTGATGAAGTAAAAAGAGGCATTTATAAGAGAACTGCTGTCA
TTCAAGAATCTGAAAGCCATAGCAAGAATGGAGCTAAGGTAGAATTACCTCTCAGTGACACATTGGCAAT
TAAAGGAAAAGTTATTGATGTGGATCACGGAATTTTGTGAAAATGTTCCCATAAATTACACCAGCAGGA
GAAGTGGTGGCTTCCAGGCTAACTTCAAAGTAGAAGAAGGAATGCATCTTTTGATAACTGGTCCCAATG
GTTGTGGGAAAAGTTCTCTTTCAGAAATCTAAGTGGGCTCTGGCCTGTGTATGAAGGAGTCTCTATAA
ACCACCTCTCAACATATGTTTTATATCCACAAAGGCCATATATGTCTTGGAAAGTCTTCGGGATCAA
GTCATTTACCCTGATTCAGTGGATGATATGCATGATAAAGGTTATACAGACCAAGATCTGGAACGTATCC
TACACAATGTCCATCTCTATCACATAGTTCAAAGAGAAGGAGGATGGGATGCTGTTATGGACTGGAAAGA
TGTCTGTGAGGAGGGAAAAGCAAAGAATGGGCATGGCTCGTATGTTTTATCATAAACCAAAATATGCC
TTGCTGGATGAATGTACCAGTGTGTCAGCATTGATGTCGAAGGAAAGATATTTCAAGGCTGCAAAAAGGGG
CTGGAATTTCTTACTGTCTATAACACACAGACCTTCTCTTTGAAAATACCACACACATTTATTACAGTT
TGATGGTGAAGGAGGTTGGCGCTTTGAACAATGGATACTGCTATCCGTTTGACATTGAGTGAAGAAAAA
CAAAGCTAGAATCTCAGCTAGCTGGAATTCCTAAAATGCAGCAGAGACTCAATGAATATGAAAAATTT
TGGGAGAAGACTCAGTGTGAAAACAATAAAAATGAAGATGAGACATCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC211199 protein sequence
Red=Cloning site Green=Tags(s)

MTHTMLNAAADRVKWRSSAAKRAACLVAAYALKTLYPIIGKRLKQSGHGKKAAYPAENTEILHCTE
TICEKPSPGVNADFFKQLELRKILFPKLVTTETGWLCLHSVALISRTFLSIYVAGLDGKIVKSIVEKFP
RTFIIKLIKWLMIAIPATFVNSAIRYLECKLALAFRTRLDVHAYETYFTNQTYKVINMDGRLANPDQSL
TEDIMMFSQSVAHLYSNLTKPILDVMLTSYTLIQTATSRGASPIGPTLLAGLVVYATAKVLKACSPKFGK
LVAAEEAHRKGYLRVHSRIIANVEEIAFYRGHKVEMKQLQKSYKALADQMNLILSKRLWYIMIEQFLMKY
VWSSSGLIMVAIPIITATGFADGEDGQKQVMVSETEAFTTARNLLASGADAIERIMSSYKEVTELAGYT
ARVYNMFVWFDEVKRGIYKRTAVIQESESHTKNGAKVELPLSDTLAIGKVIDVDHGIICENVPIITPAG
EYVASRLNFKVEEGMHLITGPNCGKSSLFRLSGLWPVYEGVLKPPPQHMFIYIPQRPYMSLGSRLDQ
VIYDPSVDDMHDKGYTDQDLERILHNHLYHIVQREGGWDVMDWKDVLSGGEKQRMGMARMFYHKPKYA
LLDECTSAVSIDVEGKIFQAAGAGISLLSITHRPSLWKYHTHLLQFDGEGGWRFELDTAIRLTLSEK
QKLESQLAGIPKMQRNLCKILGEDSVLTKIKNEDETS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6373_a10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_005164

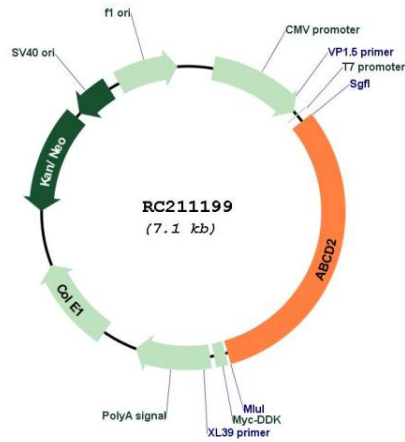
ORF Size: 2220 bp

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](#)

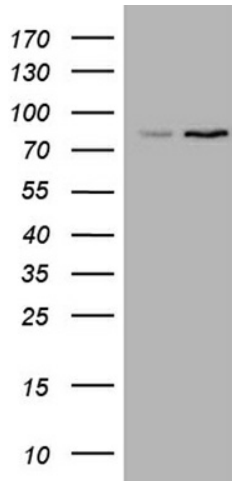
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none">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_005164.4
RefSeq Size:	5341 bp
RefSeq ORF:	2223 bp
Locus ID:	225
UniProt ID:	Q9UBJ2
Cytogenetics:	12q12
Domains:	ABC_tran, AAA
Protein Families:	Druggable Genome
Protein Pathways:	ABC transporters
MW:	83.2 kDa
Gene Summary:	<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. The function of this peroxisomal membrane protein is unknown; however this protein is speculated to function as a dimerization partner of ABCD1 and/or other peroxisomal ABC transporters. Mutations in this gene have been observed in patients with adrenoleukodystrophy, a severe demyelinating disease. This gene has been identified as a candidate for a modifier gene, accounting for the extreme variation among adrenoleukodystrophy phenotypes. This gene is also a candidate for a complement group of Zellweger syndrome, a genetically heterogeneous disorder of peroxisomal biogenesis. [provided by RefSeq, Jul 2008]</p>

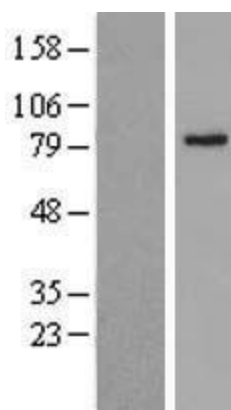
Product images:



Circular map for RC211199



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ABCD2 (Cat# RC211199, 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-ABCD2 (Cat# [TA810066])(1:500). Positive lysates [LY417474] (100ug) and [LC417474] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417474]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211199 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).