

Product datasheet for **RG211199**

ABCD2 (NM_005164) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ABCD2 (NM_005164) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ABCD2
Synonyms:	ABC39; ALDL1; ALDR; ALDRP; hALDR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG211199 representing NM_005164
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACACATATGCTAAATGCAGCAGCTGATCGAGTGAATGGACCAGATCGAGTCTGCTAAGAGGGCTG
 CCTGCCTGGTGGCTGCGGCATATGCTCTGAAAACCCTCTATCCCATCATTGGCAAGCGTTTAAAGCAATC
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 TTGCTGGATGAATGTACCAGTGTGTCAGCATTGATGTGCAAGGAAAGATATTTCAAGGCTGCAAAAGGGG
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 TGATGGTGAAGGAGGTTGGCGCTTTGAACAATTGGATACTGCTATCCGTTTGACATTGAGTGAAGAAAAA
 CAAAAGCTAGAATCTCAGCTAGCTGGAATTCCTAAAATGCAGCAGAGACTCAATGAATATGAAAAATTT
 TGGGAGAAGACTCAGTGTGAAAACAATAAAAATGAAGATGAGACATCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG211199 representing NM_005164
Red=Cloning site Green=Tags(s)

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MTHMLNAAADRVKWRSSAAKRAACLVAAYALKTLYPIIGKRLKQSGHGKKAAYPAENTEILHCTE
TICEKPSPGVNADFFKQLLELRKILFPKLVTTETGWCLHLSVALISRTFLSIYVAGLDGKIVKSIVEKPP
RTFIIKLIKWLMIAIPATFVNSAIRYLECKLALAFRTRLVDHAYETYFTNQTYKVINMDGRLANPDQSL
TEDIMMFSQSVAHLYSNLTKPILDVMLTSYTLIQTATSRGASPIGPTLLAGLVVYATAKVLKACSPKFGK
LVAAEEAHRKGYLRVHSRIIANVEEIAFYRGHKVEMKQLQKSYKALADQMNLILSKRLWYIMIEQFLMKY
VWSSSGLIMVAIPIITATGFADGEDGQKQVMVSERTEAFTTARNLLASGADAIERIMSSYKEVTELAGYT
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EYVASRLNFKVEEGMHLLITGPNCGKSSLFRIISGLWPVYEGVLYKPPPQHMFIYIPQRPYMSLGSRLDQ
VIYPDSVDDMHDKGYTDQDLERILHNHLYHIVQREGGWDVMDWKDVLSGGEKQRMGMARMFYHKPKYA
LLDECTSAVSIDVEGKIFQAAGGAGISLLSITHRPSLWKYHTHLLQFDGEGGWRFELDTAIRLTLSEK
QKLESQLAGIPKMQRNLNELCKILGEDSVLKTIKNEDETS
    
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



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:

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: 3969 bp

RefSeq ORF: 2223 bp

Locus ID: 225

UniProt ID: [Q9UBJ2](#)

Cytogenetics: 12q12

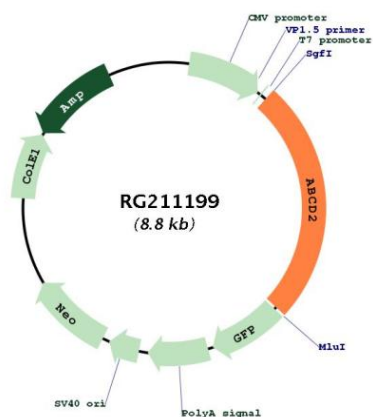
Domains: ABC_tran, AAA

Protein Families: Druggable Genome

Protein Pathways: ABC transporters

Gene Summary: 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]

Product images:



Circular map for RG211199