

## Product datasheet for **RN201592**

### **Abcd1 (NM\_001108821) Rat Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Abcd1 (NM_001108821) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Abcd1
Synonyms:	RGD1562128
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >RN201592 representing NM\_001108821  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCGCTACTCTCCACTCCCTCCCGGCCCTCGCGGGTGACCACGCTTAAGCGCACAGCTGTGGTCTGG  
 CCCTCACAGCCTATGGAGTCCACAAAATCTACCCTCTAGTACGGCAGTGTCTGACTCCTGCCAGAGGTCC  
 TCAGGTGCCAGCTGGGGAGTCCACGCAAGAGGCCCTCTGGGGCCACCACAGCCAAGGCTGGCATGAACCGG  
 GTATTCCTGCAGCGGCTCCTGGTCTCCTGAGGCTGCTGTTCCCGGAGTCTTGTGCCGGAAACAGGGC  
 TACTGGCCCTGCATTCTGCTGCCCTGGTAAGCCGAACCTTCTGTCTGTGTATGTTGCCCGCTGGACGG  
 CAGACTGGCCCGCTGCATTGTACGTAAGGACCCAAGGCCCTTAGCTGGCAACTGCTGCAGTGGCTCCTC  
 ATCGCCCTTCTGCCACTTTCATCAACAGTCCATCCGCTACCTAGAGGGCCAGCTGGCTCTTTCTTTCC  
 GAAGCCGTCTAGTAGCTCATGCCTATGGCCTCTACTTCTCCAGCAGACTTACTACCGAGTAAGCAACAT  
 GGATGGACGGCTTCGAAACCCTGACCAGTCTCTGACAGAGGATATGGTAGCCTTTGCTGCTTCTGTAGCC  
 CACCTTTATTCCAACCTGACCAAGCCACTCCTGGATGTGGCTGTGACCTCTACACTCTTCTTCGAGCTG  
 CCCGATCCCGAGGAGCTGGTACAGCCTGGCCCTCAGCCATCGCTGGCCTGGTGGTGTTCCTCACAGCCAA  
 CGTGCTTCGAGCCTTCTCTCCAAGTTTGGGGAGCTAGTGGCAGAGGAGGCACGGCGAAAGGGGAACTG  
 CGCTACATGCACTCTCGAGTGGTGGCAACTCAGAGGAAATTGCCTTCTACGGGGCCATGAGGTAGAGC  
 TGGCACTACTACAACACTCCTATCAAGACTGGCTTACAGATCAACCTCATCTCTAGAACGCCTGTG  
 GTATGTGATGCTAGAAGCTTCCATGAAATATGTGTGGAGTGCATCTGGCCTGCTCATGGTAGCTGTC  
 CCCATCATCACAGCCACTGGCTATGCAGAGTCAAGTCAAGAGCCATGAAAAAGGCAGCCTTAGAAATGA  
 AGGAAGAGGAGCTGGTTAGTGAACGTACAGAAGCCTTACCATTGCCGAAACCTCCTCACAGCTGCTGC  
 AGATGCCACTGAGAGGATCATGTATCCTACAAGGAGGTGACAGAGCTGGCTGGCTACACAGCCAGGGTG  
 TACGAGATGTTCCAGGATTTGAAGATGTCCAACACTGTCGTTTTAAGAGGACAGGAGATCTAGAGGAGG  
 CTCAGGCTGGGCCTGGTCCATGGTGCATTCTGGTGTTCATATAGAAGGGCCCTGAAGATCCAAGGCCA  
 GGTGGTGGATGTGGAGCAGGGGATCATCTGTGAGAACATCCCTATCATCACCCACTGGAGAGGTGGT  
 GTGGCCAGCCTCAACATCAGGGTGGAGGAAGGCATGCACCTGCTCATCACAGGCCCAATGGCTGCGGCA  
 AGAGTTCTCTGTTCCGAATCCTAGGTGGACTCTGGCCAACATACAGTGGGACTCTATAAGCCCCACC  
 CCAGCGCATGTTCTATATCCCTCAGAGGCCCTACATGTCCGTGGGCTCCTTGCCTGACCAAGTGATCTAT  
 CCTGACTCTGCGAAGACATGCGGAGGAAGGGCTGCTCGGAGCAGCAGCTGGAAGCCATCCTGGGCATCG  
 TGCATCTCCGACACATCCTGCAACGGGAGGGAGGTTGGGAGGCTGTGTGTGACTGGAAGGACGTCCTTTC  
 TGGTGGTGAAGCAGAGGATTGGTATGGCGCGCATGTTCTATCACAGGCCCAAGTACGCCCTCCTGGAT  
 GAGTGCCTAGTCCCGTGAAGTATGATGTGGAAGGCAAGATCTTCCAAGCAGCCAAAGATGCTGGTATCT  
 CACTGTGTTCCATCACCCATCGACCCTCCCTATGGAAGTACCACACACTTGTGTCAGTTTGTGGGGA  
 GGGAGGCTGGAAGTTTGAAGCTGGATTCTGTGCCCGCTGAGCCTGACTGAAGAGAAGCAGCGCCTG  
 GAGCAGCAACTGGCAGGCATCCCTAAGATGCAGGGGCGCCTTCAAGAGCTCCGCCAGATCCTTGGCGAAG  
 CTGCAGCCCCAGTTCAACCTCTGGTCCCAGGCATCCCCACT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_001108821

**Insert Size:** 2214 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001108821.1, NP_001102291.1</u>
<b>RefSeq Size:</b>	3411 bp
<b>RefSeq ORF:</b>	2214 bp
<b>Locus ID:</b>	363516
<b>UniProt ID:</b>	<u>D3ZHR2</u>
<b>Cytogenetics:</b>	Xq37
<b>Gene Summary:</b>	Plays a role in the transport of free very-long-chain fatty acids (VLCFAs) as well as their CoA-esters across the peroxisomal membrane by acting as an ATP-specific binding subunit releasing ADP after ATP hydrolysis (PubMed:12176987). Thus, plays a role in regulation of VLCFAs and energy metabolism namely, in the degradation and biosynthesis of fatty acids by beta-oxidation, mitochondrial function and microsomal fatty acid elongation (PubMed:25043761). Involved in several processes; namely, controls the active myelination phase by negatively regulating the microsomal fatty acid elongation activity and may also play a role in axon and myelin maintenance. Controls also the cellular response to oxidative stress by regulating mitochondrial function like, mitochondrial oxidative phosphorylation and depolarization. And finally controls the inflammatory response by positively regulating peroxisomal beta-oxidation of VLCFAs (By similarity).[UniProtKB/Swiss-Prot Function]