

## Product datasheet for **RG210072**

### Phytoceramidase (ACER3) (NM\_018367) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Phytoceramidase (ACER3) (NM_018367) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Phytoceramidase
Synonyms:	APHC; PHCA; PLDECO
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210072 representing NM_018367 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTCCGGCCGCGGACCGAGAGGGCTACTGGGGCCCCACGACCTCCACGCTGGACTGGTGGCAGGAGA  
ACTACTCCGTGACCTGGTACATCGCCGAGTTCTGGAATACAGTGAGTAACCTGATCATGATTACCTCC  
AATGTTCCGGTGAATTCAGAGTGTAGAGACGGTCTGGAAAACGGTACATTGCTTCTTATTTAGCACTC  
ACAGTGGTAGGAATGGGATCCTGGTCTCCACATGACTCTGAAATATGAAATGCAGCTATTGGATGAAC  
TCCAATGATATACAGCTGTTGCATATTTGTGTACTGCATGTTTGAATGTTTCAAGATCAAGAACTCAGT  
AACTACCATCTGCTTTTTACCTTAGTTCTATTAGTTTAAATAGTAACCACAGTTTACCTTAAGGTA  
GAGCCAATATTCATCAGGTCATGTATGGAATGTTGGTCTTTACATTAGTACTTCGATCTATTTATATTG  
TTACATGGGTTTATCCATGGCTTAGAGGACTGGTTATACATCATTGGGTATATTTTATTTGGGATTTT  
ATTTTGAATATAGATAACATATTTTGTGAGTCACTGAGGAACTTTCGAAAGAAGGTACCACCTATCATA  
GGTATTACCACACAATTCATGCATGGTGGCATATTTAACTGGCCTTGGTTCTATCTTCACATCCTTT  
TCAGTTTGTATAACAAGAACACTTACCTGAGATATAGCCAAAAGTGAAGTTTCTCTTTGGAATCTGGCC  
AGTGATCTGTTTGAGCCTCTCAGGAAGCAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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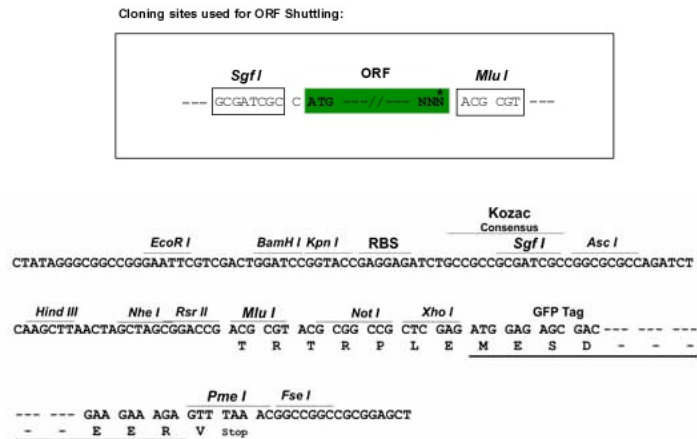
**Protein Sequence:** >RG210072 representing NM\_018367  
 Red=Cloning site Green=Tags(s)

MAPAADREGYWGPTTSTLDWCEENYSVTWYIAEFWNTVSNLIMIIPPMFGAIQSVRDGLEKRYIASYLAL  
 TVVGMGSWCFHMTLKYEMQLLDELPMIYSCCIFVYCMFECFKIKNSVNYHLLFTLVLFSLIVTTVYLKVK  
 EPIFHQVMYGMLVFTLVLRSIYIVTWVYPWLRGLGYTSLGIFLLGFLFWNIDNIFCESLRNFRKKVPPII  
 GITTQFHAWWHILTGLGSYLHILFSLYTRTLYLRYPKVKFLFGIWPVILFEPLRKH

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_018367

**ORF Size:** 801 bp

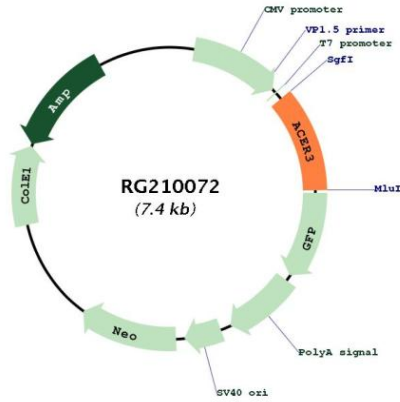
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

<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>	<a href="#">NM_018367.4</a>
<b>RefSeq Size:</b>	3473 bp
<b>RefSeq ORF:</b>	804 bp
<b>Locus ID:</b>	55331
<b>UniProt ID:</b>	<a href="#">Q9NUN7</a>
<b>Cytogenetics:</b>	11q13.5
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Sphingolipid metabolism
<b>Gene Summary:</b>	Endoplasmic reticulum and Golgi ceramidase that catalyzes the hydrolysis of unsaturated long-chain C18:1-, C20:1- and C20:4-ceramides, dihydroceramides and phytoceramides into sphingoid bases like sphingosine and free fatty acids at alkaline pH (PubMed:20068046, PubMed:26792856, PubMed:20207939, PubMed:11356846, PubMed:30575723). Ceramides, sphingosine, and its phosphorylated form sphingosine-1-phosphate are bioactive lipids that mediate cellular signaling pathways regulating several biological processes including cell proliferation, apoptosis and differentiation (PubMed:20068046). Controls the generation of sphingosine in erythrocytes, and thereby sphingosine-1-phosphate in plasma (PubMed:20207939). Through the regulation of ceramides and sphingosine-1-phosphate homeostasis in the brain may play a role in neurons survival and function (By similarity). By regulating the levels of proinflammatory ceramides in immune cells and tissues, may modulate the inflammatory response (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG210072