

## Product datasheet for **RG236748**

### Phytoceramidase (ACER3) (NM\_001300953) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Phytoceramidase (ACER3) (NM_001300953) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ACER3
Synonyms:	APHC; PHCA; PLDECO
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG236748 representing NM_001300953. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCTCCGGCCGCGGACCGAGAGGGCTACTGGGGCCCCACGACCTCCACGCTGGACTGGTGCGAGGAG
AACTACTCCGTGACCTGGTACATCGCCGAGTTCTTGGTAGGAATGGGATCCTGGTGCTTCCACATGACT
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TTAATAGTAACCACAGTTTACCTTAAGGTAAGAGCCGATATCCATCAGGTCATGTATGGAATGTTG
GTCTTTACATTAGTACTCGATCTATTTATATTGTTACATGGGTTTATCCATGGCTTAGAGGACTGGGT
TATACATCATTGGGTATATTTTTATTGGGATTTTTATTTTGAATATAGATAACATATTTTGTGAGTCA
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ATTTTAACTGGCCTTGGTTCCTATCTTCACATCCTTTTCAGTTTGTATACAAGAACAATTTACCTGAGA
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



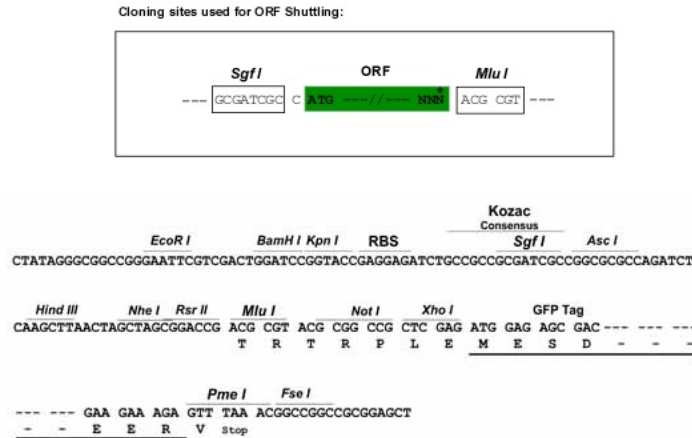
[View online »](#)

Protein Sequence: >Peptide sequence encoded by RG236748  
 Blue=ORF Red=Cloning site Green=Tag(s)

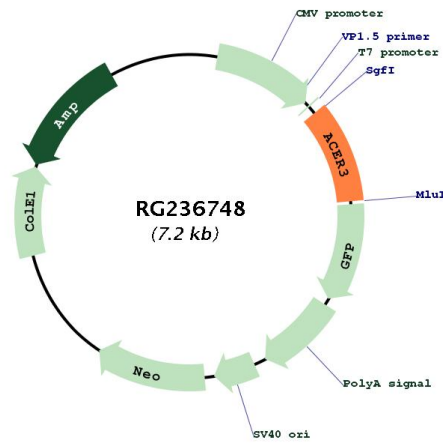
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 YTSLGIFLLGLFWNIDNIFCESLRNFRKKVPIIGITTTQFHAWHILTGLGSLHILFSLYTRTLYLR  
 YRPKVKFLFGIWPVILFEPLRKH  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSTYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIIGDFKVMGTGFPED  
 SVIFTDKIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001300953

<b>ORF Size:</b>	690 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>RefSeq:</b>	<a href="#">NM_001300953.2</a>
<b>RefSeq Size:</b>	7279 bp
<b>RefSeq ORF:</b>	693 bp
<b>Locus ID:</b>	55331
<b>Cytogenetics:</b>	11q13.5
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Sphingolipid metabolism
<b>MW:</b>	27.9 kDa
<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]