

Product datasheet for **RC236748**

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:	Myc-DDK
Symbol:	ACER3
Synonyms:	APHC; PHCA; PLDECO
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC236748 representing NM_001300953 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTCCGGCCCGGACCGAGAGGGCTACTGGGGCCCCAGACCTCCACGCTGGACTGGTGCAGGAGA
ACTACTCCGTGACCTGGTACATCGCCGAGTTCTTGGTAGGAATGGGATCCTGGTGCTCCACATGACTCT
GAAATATGAAATGCAGCTATTGGATGAACTCCAATGATATACAGCTGTTGCATATTTGTACTGCATG
TTTGAATGTTTCAAGATCAAGAAGTAAAGAGCCGATATTCATCAGGTCATGTATGGAATGTTGGTCTT
TAGTAACCACAGTTTACCTTAAGGTAAGAGCCGATATTCATCAGGTCATGTATGGAATGTTGGTCTT
TACATTAGTACTTCGATCTATTTATATTGTTACATGGGTTTATCCATGGCTTAGAGGACTGGGTTATACA
TCATTGGGTATATTTTTATTGGGATTTTTATTTTGAATATAGATAACATATTTTGTGAGTCACTGAGGA
ACTTTCGAAAGAAGTACCACCTATCATAGGTATTACCACACAATTTTCATGCATGGTGGCATATTTAAC
TGGCCTTGGTTCCTATCTTACATCCTTTTCAGTTTGTATACAAGAACACTTTACCTGAGATATAGCCA
AAAGTGAAGTTTCTTTTGAATCTGGCCAGTGATCCTGTTTGGCCTCTCAGGAAGCAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC236748 representing NM_001300953
Red=Cloning site Green=Tags(s)

MAPAADREGYWGPTTSTLDWCEENYSVTWYIAEFLVGMGSWCFHMTLKYEMQLLDELPMIYSCCIFVYCM
 FECFKIKNSVNYHLLFTLVLFSLIVTTVYLKVKKEPIFHQVMYGMLVFTLVLSIYIVTWVYPWLRGLGYT
 SLGIFLLGLFWNIDNIFCESLRNFRKKVPPIIGITTFHAWWHILTGLGSYLHILFSLYTRTLYLRYRP
 KVKFLFGIWPVILFEPLRKH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

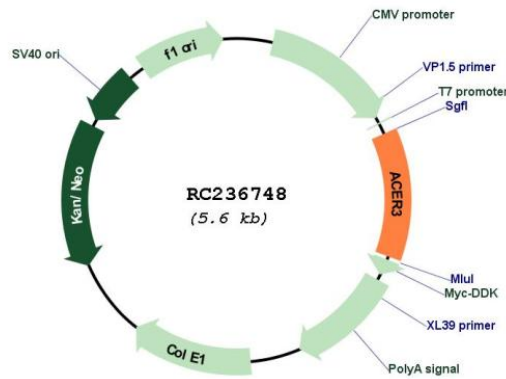
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001300953

ORF Size: 690 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_001300953.2
RefSeq Size:	7279 bp
RefSeq ORF:	693 bp
Locus ID:	55331
Cytogenetics:	11q13.5
Protein Families:	Transmembrane
Protein Pathways:	Sphingolipid metabolism
MW:	27.9 kDa
Gene Summary:	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]