

Product datasheet for **RG236254**

Phytoceramidase (ACER3) (NM_001300954) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Phytoceramidase (ACER3) (NM_001300954) 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: >RG236254 representing NM_001300954.
Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGATATACAGCTGTTGCATATTTGTGACTGCATGTTTGAATGTTTCAAGATCAAGAACTCAGTAAAC
TACCATCTGCTTTTACCTTAGTTCTATTCAGTTAATAGTAACACAGTTTACCTTAAGTAAAAGAG
CCGATATCCATCAGGTCATGTATGGAATGTTGGTCTTTACATTAGTACTTCGATCTATTTATATTGTT
ACATGGGTTTATCCATGGCTTAGAGGACTGGGTATACATCATTGGGTATTTTTTATTGGGATTTTTA
TTTTGGAATATAGATAACATATTTGTGAGTCACTGAGGAACTTTCGAAAGAAGGTACCACCTATCATA
GGTATTACCACACAATTCATGCATGGTGGCATATTTAACTGGCCTTGGTTCCTATCTTCACATCCTT
TTCAGTTTGTATACAAGAACACTTTACCTGAGATATAGGCCAAAAGTGAAGTTTCTCTTTGGAATCTGG
CCAGTGATCCTGTTTGGCCTCTCAGGAAGCAT
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```

Protein Sequence: >Peptide sequence encoded by RG236254
Blue=ORF Red=Cloning site Green=Tag(s)

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MIYSCCIFVYCMFECKIKNSVNYHLLFTLVLFSLIVTTVYLKVKPIFHQVYMGMLVFTLVLRSIYIV
TWYYPWLRGLGYTSLGIFLLGFLFWNIDNIFCESLRNFRKKVPPIIIGITTQFHAWWHILTGLGSYLHIL
FSLYTRTLYLRYRPVKVFLFGIWPVILFEPLRKH
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPYSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

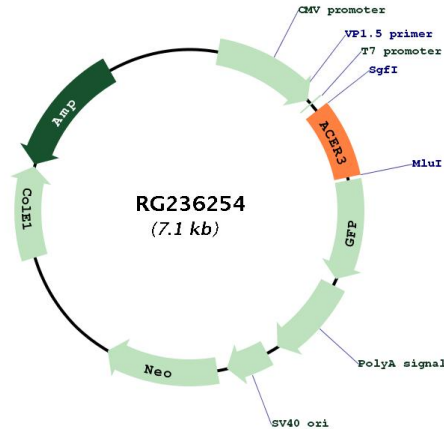
Restriction Sites: SgfI-MluI



Cloning Scheme:



Plasmid Map:



ACCN: NM_001300954

ORF Size: 516 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).
RefSeq:	NM_001300954.2
RefSeq Size:	7461 bp
RefSeq ORF:	519 bp
Locus ID:	55331
Cytogenetics:	11q13.5
Protein Families:	Transmembrane
Protein Pathways:	Sphingolipid metabolism
MW:	21.1 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]