

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:	Phytoceramidase
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)

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GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGATATACAGCTGTTGCATATTTGTGTACTGCATGTTTGAATGTTTCAAGATCAAGAACTCAGTAAAC
TACCATCTGCTTTTACCTTAGTTCTATTCAGTTAATAGTAACCACAGTTTACCTTAAGTAAAAGAG
CCGATATCCATCAGGTCATGTATGGAATGTTGGTCTTTACATTAGTACTTCGATCTATTTATATTGTT
ACATGGGTTTATCCATGGCTTAGAGGACTGGGTATACATCATTGGGTATATTTTATTGGGATTTTTA
TTTTGGAATATAGATAACATATTTGTGAGTCACTGAGGAACCTTCGAAAGAAGGTACCACCTATCATA
GGTATTACCACACAATTCATGCATGGTGGCATATTTAACTGGCCTTGTTCTATCTTCACATCCTT
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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MIYSCCIFVYCMFECKIKNSVNYHLLFTLVLFSLIVTTVYLVKVEPIFHQVYMGMLVFTLVLRSIYIV
TWYYPWLRGLGYTSLGIFLLGFLFWNIDNIFCESLRNFRKKVPPIIIGITTFHAWWHILTGLGSLYHIL
FSLYTRTLYLRYRPVKVFLFGIWPVILFEPLRKH
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

Restriction Sites: SgfI-MluI



Cloning Scheme:


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

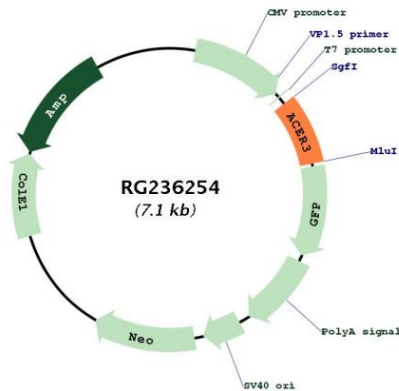
Protein Pathways: Sphingolipid metabolism

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]

Product images:



Circular map for RG236254