

Product datasheet for RC211332

ASAH3 (ACER1) (NM_133492) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ASAH3 (ACER1) (NM_133492) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ASAH3
Synonyms:	ALKCDase1; ASAH3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211332 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCTAGCATCTTCGCCTATCAGAGCTCCGAGGTGGACTGGTGTGAGAGCAACTCCAGTACTCGGAGC
TGGTGGCCGAGTTCTACAACACGTTCTCCAATATCCCCTTCTTCATCTTCGGGCCACTGATGATGCTCCT
GATGCACCCGATGCCAGAAGCGCTCCCGCTACATTTACGTTGTCTGGGTCCTTTCATGATCATAGGC
CTGTTCTCCATGTATTTCCACATGACGCTCAGCTTCTGGGCCAGCTGCTGGACGAGATCGCCATCTGT
GGCTCCTGGGCAGTGGCTATAGCATATGGATGCCCGCTGCTATTTCCCCTCCTTCTGGGGGAACAG
GTCCCAGTTCATCCGCCTGGTCTTCATCACCACTGTGGTCAGCACCCCTTCTGTCCCTCCTGCGGCCACG
GTCAACGCCTACGCCCTCAACAGCATTGCCCTGCACATTTCTACATCGTGTGCCAGGAGTACAGGAAGA
CCAGCAATAAGGAGCTTCGGCACCTGATTGAGGTCTCCGTGGTTTTATGGGCTGTTGCTCTGACCAGCTG
GATCAGTGACCGTCTGCTTTCAGCTTCTGGCAGAGGATTCATTTCTTCTATCTGCACAGCATCTGGCAT
GTGCTCATCAGCATCACCTTCCCTTATGGCATGGTCACCATGGCCTTGGTGGATGCCAATATGAGATGC
CAGGTGAAACCCTCAAAGTCCGCTACTGGCCTCGGGACAGTTGGCCCGTGGGGCTGCCCTACGTGGAAT
CCGGGGTGATGACAAGGACTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC211332 protein sequence
Red=Cloning site Green=Tags(s)

MPSIFAYQSSEVDWCESNFQYSELVAEFYNTFSNIPFFIFGPLMMLMHPYAQKRSRYIYVWVLFMIIG
 LFSMYFHMTLSFLGQLLDEIAILWLLGSGYSIWMPRCYFSPFLGGNRSQFIRLVFITTVVSTLLSFLRPT
 VNAYALNSIALHILYIVCQEYRKTSNKELRHLIEVSVLVAVALTSWISDRLLCSFWQRIHFFYLHSIWH
 VLISITFPYGMVTMALVDANYEMPGETLKVRYWPRDSWPVGLPYVEIRGDDKDC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6370_h05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_133492

ORF Size: 792 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:

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_133492.3](#)

RefSeq Size: 1088 bp

RefSeq ORF: 795 bp

Locus ID: 125981

UniProt ID: [Q8TDN7](#)

Cytogenetics: 19p13.3

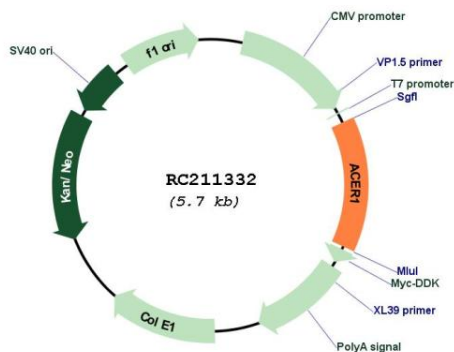
Protein Families: Transmembrane

Protein Pathways: Metabolic pathways, Sphingolipid metabolism

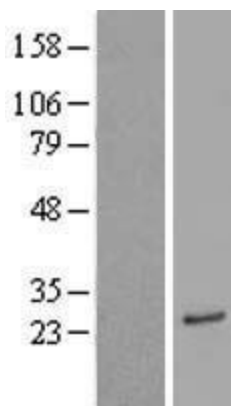
MW: 31.1 kDa

Gene Summary: Ceramides are synthesized during epidermal differentiation and accumulate within the interstices of the stratum corneum, where they represent critical components of the epidermal permeability barrier. Excess cellular ceramide can trigger antimitogenic signals and induce apoptosis, and the ceramide metabolites sphingosine and sphingosine-1-phosphate (S1P) are important bioregulatory molecules. Ceramide hydrolysis in the nucleated cell layers regulates keratinocyte proliferation and apoptosis in response to external stress. Ceramide hydrolysis also occurs at the stratum corneum, releasing free sphingoid base that functions as an endogenous antimicrobial agent. ACER1 is highly expressed in epidermis and catalyzes the hydrolysis of very long chain ceramides to generate sphingosine (Houben et al., 2006 [PubMed 16477081]; Sun et al., 2008 [PubMed 17713573]).[supplied by OMIM, Jul 2010]

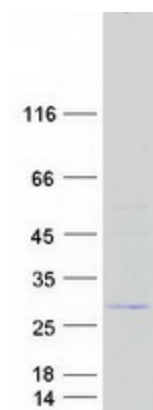
Product images:



Circular map for RC211332



Western blot validation of overexpression lysate (Cat# [LY408822]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211332 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACER1 protein (Cat# [TP311332]). The protein was produced from HEK293T cells transfected with ACER1 cDNA clone (Cat# RC211332) using MegaTran 2.0 (Cat# [TT210002]).