

## Product datasheet for RR215418

### Asah1 (NM\_053407) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Asah1 (NM_053407) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Asah1
Synonyms:	Asah
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RR215418 representing NM_053407 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGGGCCGTAGTCTCCTCACCTGGGTCTGGCCGGGCTGTACCTGCGCCAGGCACAGCAAGTGC  
CACCGTGGACAGAAGATTGCAGAAAATCAACTTATCCTCCTTCTGGACCAACCTATAGAGGACCAGTTCC  
GTGGTACACCATAAATCTTGATTTACCACCCTACAAGAGATGGCATGAATTATTGGCTCACAAGGCACCT  
GTGTTGAGAACTTATGTAATCCATCTCGAATTTAGTGAATGCATTTGTCCAAGTGGAAAAATAATGC  
AGATGGTGGATGAAAAGTTGCCTGGTCTGATTGGCAGCATTCTGGCCCTTTTGGAGAGGAAATGAGGGG  
GATTGCAGATGTTACTGGGATTCCTCTAGGAGAGATTATTTCAATCAACATTTTCTATGAACTGTTCAAC  
ATGTGTACATCGATCATAACTGAAGATGAAAAAGGTCATTTACTACATGGAAGAAACATGGATTTTGAA  
TATTTCTTGGGTGGAACATTAACAACAACACTTGGGTGGTACAGAAAGAAATTAAGCCTTTAACAGTGAA  
TTTGGACTTCCAGAGGAACAATAAGACTGTGTTCAAGGCTACAAGTTTCGCTGGATACGTGGGCATGTTG  
ACAGGATTCAAACCAGGACTGTTAAGTCTTACACTGAATGAACGTTTCAGTTAAATGGTGGTTATCTGG  
GTATCCTAGAATGGATGTTTGGAAAGAAAAATGCCCAATGGGTAGGGTTTACTACTAGATCAGTTCTGGA  
AAATAGCACAAGTTATGAAGAAGCCAAGAATATATTGACCAAGACCAAGATAACGGCCCCAGCATATTTT  
ATCCTGGGAGGCAACCAGTCTGGAGAAGGTTGTGTATTACACGAGAAAGAAAGAGTCTTTAGACGTCT  
ATGAACCTTGATCCTAAGCATGGCAGATGGTACGTGGTACAAACCAATTATGACCGGTGGAAAAACACCTT  
GTTTCTTGATGACCGCAGAACACCTGCGAAGAAGTGTCTAAATCACACGACACAGAAAGAACTGTGTCATT  
GCTACCATCTATGATGTTCTATCAACAAAACCTGTCTCAACAAGCTGACTGATTCACAACCTTGATAG  
ATGTCACCAAAGATCAATTTGAAAGCCACCTTCGAGATTGCCAGACCCTTGATAGGCTGG

**ACGGT**ACGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RR215418 representing NM\_053407  
Red=Cloning site Green=Tags(s)

MLGRSLLTWLAAAVTCAQAQQVPPWTEDCRKSTYPPSGPTYRGPVWPWTINLDLPPYKRWHELLAHKAP  
 VLRTL VNSISNL VNAFVPSGKIMQMVDEKLPGLIGSIPGPFGEEMRGIADVTGIPLGEIISFNIFYELFT  
 MCTSIIITEDGKGHLLHGRNMDFGIFLGNINNTWVVTEELKPLTVNLDFQRNNTVFKATSFAGYVGM  
 TGFKPGLLSLTLNERFSLNGGYLGILEWMFGKNAQWVGFITRSVLENSTSYEEAKNILTKTKITAPAYF  
 ILGNGSSEGCVITRERKESLDVYELDPKHGRWYVYVQTNVDRWKNLFLDDRRTPAKKCLNHTTQKNLSF  
 ATIYDVLSTKPVLNKLTVFTTLIDVTKDQFESHLRDCPDPCIGW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_053407

**ORF Size:** 1182 bp

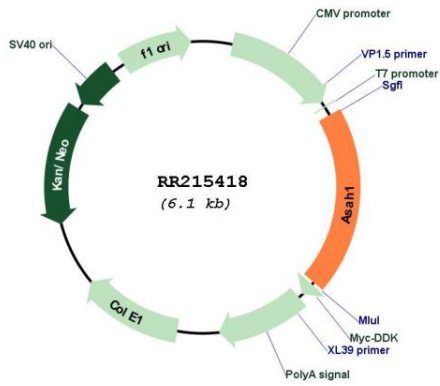
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_053407.3, NP_445859.2</u>
<b>RefSeq Size:</b>	2436 bp
<b>RefSeq ORF:</b>	1185 bp
<b>Locus ID:</b>	84431
<b>UniProt ID:</b>	<u>Q6P7S1</u>
<b>Cytogenetics:</b>	16q12.1
<b>MW:</b>	44.4 kDa
<b>Gene Summary:</b>	<p>Lysosomal ceramidase that hydrolyzes sphingolipid ceramides into sphingosine and free fatty acids at acidic pH (By similarity). 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 (By similarity). Has a higher catalytic efficiency towards C12-ceramides versus other ceramides (By similarity). Also catalyzes the reverse reaction allowing the synthesis of ceramides from fatty acids and sphingosine (By similarity). For the reverse synthetic reaction, the natural sphingosine D-erythro isomer is more efficiently utilized as a substrate compared to D-erythro-dihydrosphingosine and D-erythro-phytosphingosine, while the fatty acids with chain lengths of 12 or 14 carbons are the most efficiently used (By similarity). Has also an N-acylethanolamine hydrolase activity (By similarity). By regulating the levels of ceramides, sphingosine and sphingosine-1-phosphate in the epidermis, mediates the calcium-induced differentiation of epidermal keratinocytes (By similarity). Also indirectly regulates tumor necrosis factor/TNF-induced apoptosis (By similarity). By regulating the intracellular balance between ceramides and sphingosine, in adrenocortical cells, probably also acts as a regulator of steroidogenesis (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RR215418