

Product datasheet for **MC226427**

Acer2 (NM_001290541) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Acer2 (NM_001290541) Mouse Untagged Clone
Tag: Tag Free
Symbol: Acer2
Synonyms: 2410116I05Rik; Asah3l; CRG-L1; maCER2
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC226427 representing NM_001290541
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGGCGCCCCGACTGGTGGGACCACCTGCGGGCTGGCAGTTCGGAGGTGGATTGGTGGCAGGACAAC
ACACTATCGTGCCTGCCATTGCCGAGTTCTACAACACGATCAGCAACGTCTGTTTTTCATTTTACCTCC
CATCTGCATGTGCTTGTCCGCCAGTACGCAACGTGCTTCAACAGCGGCATCTACTTAATATGGACGCTC
CTAGTTGTAGTGGGATTGGATCTGTCTACTTCCATGCAACGCTGAGTTTCTGGGTGAGATGCTTGATG
AACTTGCCATTCTGTGGTTCTGATGTGTGCTTTGGCCATGTGGTTTCCAGGAGGTATTTACCAAAGAT
CTTTCCGAATGACAGGTGTGACAATGTGCGTGTGTTAAGCTGGGCTCTTCTCTGGCCTCTGGTGGACT
CTGGCTCTCTTCTGCTGGATCAGCGACCAAGCCTTCTGTGAGCTGCTCTCCTCTTCACTTCCCCTACC
TGCACTGTGTGGCATAATCTCATCTGCCTTGCCTCGTACCTGGGCTGTGTGCTTCCGCTACTTTGA
TGCTGCCTCAGAGATACCTGAGCAAGTCCAGTCATCAGATTCTGGCCAGCGAGAAATGGGCTTTTATT
GGTGTCCCTTATGTGCCCTTCTGTGTGCCACAAGAAGTCGCCAGTCAAGATCACG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001290541
Insert Size: 690 bp



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|-------------------------------|---|
| OTI Disclaimer: | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). |
| OTI Annotation: | Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag. |
| 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: | <u>NM_001290541.1</u> , <u>NP_001277470.1</u> |
| RefSeq Size: | 4068 bp |
| RefSeq ORF: | 690 bp |
| Locus ID: | 230379 |
| UniProt ID: | <u>Q8VD53</u> |
| Cytogenetics: | 4 C4 |

Gene Summary:

Golgi ceramidase that catalyzes the hydrolysis of ceramides into sphingoid bases like sphingosine and free fatty acids at alkaline pH (PubMed:29401619). 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:29401619). Has a better catalytic efficiency towards unsaturated long-chain ceramides, including C18:1-, C20:1- and C24:1-ceramides (By similarity) (PubMed:29401619). Saturated long-chain ceramides and unsaturated very long-chain ceramides are also good substrates, whereas saturated very long-chain ceramides and short-chain ceramides are poor substrates. Also hydrolyzes dihydroceramides to produce dihydrosphingosine (By similarity). It is the ceramidase that controls the levels of circulating sphingosine-1-phosphate and dihydrosphingosine-1-phosphate in plasma through their production by hematopoietic cells (PubMed:29401619). Regulates cell proliferation, autophagy and apoptosis by the production of sphingosine and sphingosine-1-phosphate. As part of a p53/TP53-dependent pathway, promotes for instance autophagy and apoptosis in response to DNA damage. Through the production of sphingosine, may also regulate the function of the Golgi complex and regulate the glycosylation of proteins (By similarity). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks an alternate in-frame exon in the 5' coding region, compared to variant 1. It encodes isoform 2, which lacks an internal segment and is shorter, compared to isoform 1.