

Product datasheet for **MC212348**

Acer1 (NM_175731) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Acer1 (NM_175731) Mouse Untagged Clone
Tag: Tag Free
Symbol: Acer1
Synonyms: 2310024P18Rik; AI662009; Alkcdase1; Asah3; Cer1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC212348 representing NM_175731
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGCATGTACCGGCACCAGAGCAAAGATGTCCAGCATCTTGCCTATCAGAGTTCTGAGGTGGATTGGT
GTGAGAGTAATTTCCAGCACTCAGAGTTGGTGGCCGAGTTCTACAATACGTTCCAGCAATGTGTTCTTCTCT
CATCTTTGGACCCCTCATGATGTTCCCTCATGCATCCGATGCCAGAGCGTACCCGGTGTTCATGGA
GTGTCAGTCTCTCATGCTCATAGGTCTGTTCTCCATGTATTTCCACATGACACTCAGCTTCTGGGAC
AGCTGCTGGATGAGATCTCCATCCTGTGGTTGTTGGCCAGTGGATACAGTGTGTGGCTGCCCGTTGCTA
TTTTCCCAAGTTCGTCAAGGGGAACAGGTTCTACTTCAGCTGCCTGGTAACTATAACCACTATTATCAGC
ACCTTCTTGACGTTTCGTGAAGCCACAGTCAATGCATATGCTCTCAACAGCATCGCCATCCACATCCTCT
ACATTGTGCGCACAGAGTACAAGAAGATTAGGGATGATGATCTTCGGCATCTGATTGCGGTTTCTGTGGT
CTTATGGGCCGCTGCACTGACCAGCTGGATCAGTGACCGTGTACTTTGCAGCTTCTGGCAGCGGATTAC
TTCTACTACCTGCACAGCATTGGCACGTCCTCATAAGCATCACATTTCTTATGGTATCGTGACCATGG
CCCTGGTGGATGCAAAGTATGAGATGCCAGATAAAACCCCTCAAAGTCCACTACTGGCCCCGGGACAGCTG
GGTCATCGGGCTACCCTATGTGGAGATCCAGGAGAATGACAAGAACTGC**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_175731
Insert Size: 822 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). |
| 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: | NM_175731.4 , NP_783858.1 |
| RefSeq Size: | 2429 bp |
| RefSeq ORF: | 822 bp |
| Locus ID: | 171168 |
| UniProt ID: | Q8R4X1 |
| Cytogenetics: | 17 D |
| Gene Summary: | Endoplasmic reticulum ceramidase that catalyzes the hydrolysis of ceramides into sphingosine and free fatty acids at alkaline pH (PubMed:12783875). 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:12783875). Exhibits a strong substrate specificity towards the natural stereoisomer of ceramides with D-erythro-sphingosine as a backbone and has a higher activity towards very long-chain unsaturated fatty acids like the C24:1-ceramide (PubMed:12783875). May also hydrolyze dihydroceramides to produce dihydrosphingosine (By similarity). ACER1 is a skin-specific ceramidase that regulates the levels of ceramides, sphingosine and sphingosine-1-phosphate in the epidermis, mediates the calcium-induced differentiation of epidermal keratinocytes and more generally plays an important role in skin homeostasis (PubMed:27126290, PubMed:29056331). [UniProtKB/Swiss-Prot Function] |