

Product datasheet for **MR224900**

Asah2 (NM_018830) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Asah2 (NM_018830) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Asah2
Synonyms:	A1585898
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR224900 representing NM_018830
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAAAGCGAACCTTCTCCACCTTGGAGGCATTCTCATTTTCTTCTGGTAATAATGACAGTCATCA
 CAGTGGCCCTTCTCACCTCTTGTTTGTACCAGTGGGACCATTGAAAACCACAAAGATTCAGGAAATCA
 CTGGTTTTCAACCACTCTGGGCTCCACGACAACCCAGCCCTCAATTACACAGACTCCAACTCCCT
 TCATTTGGAAGTTCAGTGGCTACTACATTGGCGTTGGGAGAGCAGATTGCACAGGACAAGTGTGAGATA
 TCAATTTGATGGGCTATGGCAAAAATGGCCAGAATGCACGGGTCTCTCACAGGCTGTTGAGCGGTGC
 TTTTATCTGGCGGATCCAGATGGGTCAAATCGAATGGCATTGTGAGCGTGGAACTATGTATGATTTCC
 CAACGACTGAGGTTGGAGTCTGAAGAGACTAGAGAGTAAATATGGCTCTGTATCGAAGAGACAATG
 TTATCCTGAGTGCATTACACACTCTGGCCAGCAGGGTTTTTCCAATATACTCTATATACTCGC
 CAGCGAGGATTACGCAACCGGACCTTTAGTACATAGTCTCTGGGATCATGAAGAGCATTGATATAGCT
 CACACAAATCTTAAACCGGCAAAATCTTATCAACAAAGGAAATGTTGCTAATGTGAGATCAACCGAA
 GCCCTCTCTTACCTTCTGAATCCACAGTCAGAGAGAGCAAGGTATTCTTCAAACACAGACAAGGAAAT
 GCTGGTCTTGAAGTGGTGGATTGAATGGAGAAGACTTGGGCTTATCAGCTGGTTGGCATCCACCCC
 GTGAGCATGAACAATAGCAACCACTTTGTGAATAGTGACAATAAGGGCTATGCGGCTTACCTTTTGGAGC
 AAGAAAAGAACAAGGCTATCTGCCTGGACAGGGACCGTTTGTAGCAGGCTTGTTCATCAAATCTCGG
 AGACGTGCACCAACATTTTGGCCCGCATTGTGTCAACACAGGGGAGTCTTGTGACAACGACAAGAGC
 ACCTGTCCAACGGTGGGCTAGCATGTGCATGGCCAGCGGACCTGGACAAGACATGTTTGGAGACACAC
 ACATTATAGGACGGATCATCTATCAGAAGGCCAAGGAGCTGTATGCCTCTGCCTCCAGGAGGTGACCGG
 CCCAGTGTTCAGCTCACCCAGTGGGTGAACATGACAGATGTGAGCGTCCAGCTCAATGCCACACACACA
 GTGAAGACGTGTAACCTGCCCTGGGCTACAGTTTTGCCGAGGACAAATTGATGGAGTTTCGGGCTCA
 ATATTACAGGGAACACGGAAGGGATCCATTCTGGGACACTCTCGGGACCAGCTCTTGGGAAAACC
 ATCTGAAGAGATTGTAGAGTGTGAGAAACCCAAACCAATCCTGCTTACAGTGGAGAGCTGACGATACCA
 CATCTTGGCAACCAGATATTGTTGATGTTGAGATTGTTACCGTTGGGCTCTTGGCCATAGCTGCTATCC
 CTGGGGAATTAACAACCATGTGGGACGAAGATTCGTGAGGCAATTAAGAAAGAAATTTGCACTTTATGG
 GATGAAGGATATGACCGTTGTTATCGCAGGTCTAAGCAATGTTTATACACATTACATTACCACATATGAA
 GAATACCAGGCTCAGCGTACGAGGCAGCATCTACAATCTATGGACCACACACCCTGTCTGCATACATCC
 AACTCTTCAGAGACCTTGTCTAAGCAATGCTACGGACACAGTAGCCAACATGAGCAGTGGTCCCGAGCC
 TCCATTCTTCAAATCTAATAGCTTCACTTATTCCTAATATTGCGGATAGAGCACAATTGGCAAACAT
 TTTGGGATGTCTTGCAGCCAGCAAACTGAATACAGAGTGGGAGAAGTGGTTGAAGTTATATTTGTAG
 GCGCTAACCCAAAGAATTCAGCAGAGAACCAGACCCATCAAACCTTCTCACTGTGGAGAAATACGAGGA
 CTCTGTAGCTGACTGGCAGATAATGTATAACGATGCCTCTGGGAGACGAGGTTTTATTGGCACAAGGA
 ATACTGGTCTGAGCAATGCAACAATACTGGCATATCCAGATACTGCCTACCTGGAATCTACAGAA
 TAAGATATTTGGACACAATCGGAAGCAGGAACCTCTGAAACCCGCTGTACTACTAGCATTGGAAGGAAT
 TTCTTCTCTTTGAAGTTGCACTACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR224900 representing NM_018830
 Red=Cloning site Green=Tags(s)

MAKRTFSTLEAFLIFLLVIMTVITVALLTLLFVTSGTIENHKDSGNHWFSTTLGSTTTQPPPITQTPNPF
 SFRNFSGYYIGVGRADCTGOVSDINLMGYGKNGQNARGLLTRLFSRAFILADPDGNSRMAFVSVELCMIS
 QRLRLEVLKRLESKYGSLYRRDNVILSAIHTHSGPAGFFQYTLYLASEGF SNRTFQYIIVSGIMKSIDIA
 HTNLKPGKIFINKGNVANVQINRSPSSYLLNPQSERARYSNTDKEMLVLKLVDLNGEDLGLISWFAIHP
 VSMNNSNHFVNSDNMGYAYLFEQEKNKGYLPGQGPFVAGFASSNLGDVSPNILGPHCVNTGESCDNDKS
 TCPNGGSPMCMASGPGQDMFESTHIIGRIYQKAKELYASASQEVTPVLAHQWVNMVDVSVQLNATHT
 VKTCKPALGYSFAAGTIDGVSGLNITQGTTEGDPFWDTLRDQLLQKPKSEEIVECQKPKPILLHSGELTIP
 HPWQPDIVDVQIVTVGSLAIAAIPGELTTMSGRRFREAIKKEFALYGMKDMTVVIAGLSNVYTHYITTYE
 EYQAQRYEAASTIYGPHLSAYIQLFRDLAKAIATDTVANMSSGPEPPFFKNLIASLIPNIADRAPIGKH
 FGDVLPAPKEYRVGEVVEVIFVGANPKNSAENQTHQTFLTVEKYEDSVADWQIMYNDASWETRFYWHKG
 ILGLSNATIYWHIPDTAYPGIYRIRYFGHNRKQELLKPAVILAFEGISSPFVVT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_018830

ORF Size: 2268 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_018830.1](#), [NP_061300.1](#)

RefSeq Size: 4835 bp

RefSeq ORF: 2271 bp

Locus ID: 54447

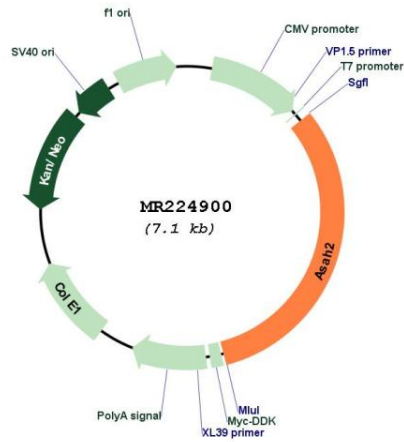
UniProt ID: [Q9JHE3](#)

Cytogenetics: 19 C1

MW: 84 kDa

Gene Summary: Plasma membrane ceramidase that hydrolyzes sphingolipid ceramides into sphingosine and free fatty acids at neutral pH (PubMed:10753931, PubMed:10652340, PubMed:16380386). 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:14557071). Also catalyzes the reverse reaction allowing the synthesis of ceramides from fatty acids and sphingosine (PubMed:10652340, PubMed:21613224). Together with sphingomyelinase, participates in the production of sphingosine and sphingosine-1-phosphate from the degradation of sphingomyelin, a sphingolipid enriched in the plasma membrane of cells (PubMed:16126722). Also participates in the hydrolysis of ceramides from the extracellular milieu allowing the production of sphingosine-1-phosphate inside and outside cells (PubMed:16126722). This is the case for instance with the digestion of dietary sphingolipids in the intestinal tract (PubMed:16380386).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR224900