OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR225887

Aloxe3 (NM_011786) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aloxe3 (NM_011786) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aloxe3
Synonyms:	e-LOX-3; eLOX-3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR225887 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGTATATCGGCTGTGTGTGACCACTGGTTCCTACCTGAAGGCTGGCACATTGGATAACATCTATG
CTACATTGGTAGGCACCTGTGGTGAAAGCCCTAAGCAGAAGCTGGATCGCGTAGGCAGGGACTTCGCCTC
TGGATCGGTTCAGAAGTACAAGGTGCGCTGTGAAGCAGAGCTGGGTGAGATCTTGCTGTTGCGCTTACAC
AAGGAGCGCTTTGCTTTCTTCTGCAAGGACCCTTGGTACTGCAGTCGCATCTGTGTCACTGCCCCCGATG
GCTCTGCTGTCCACTTTCCCTGCTACCAGTGGATCGATGGCTACTGTACTGTGGAGCTGCGGCCAGGAAC
AGCAAGAACCATCTGTCAGGATTCTCTTCCCCTCCTTCTGGACCACAGGAAACGGGAACTCCGAGCCCGC
CAAGAATGTTATCGCTGGAAGATCTTTGCCCCTGGCTTCCCTCGGATGGTGGATGTCAGCAGCTTTCAGG
AGATGGAGTCAGATAAGAAATTTGCCTTGACCAAGACAGTACCTTGTGCAGAACAGGATGACAACTCTGG
GAACCGGTACCTGCCTGGCTTTCCTATGAAGATTGACATCCCATCTCTGCTGCACATGGAACCCAACATT
CGATACTCAGCCACCAAGACGGCCTCACTGATCTTCAACGCCCTTCCTGCATCCTTTGGCATGAAGATTC
GAGGTCTCCTGGACCGCAAGGGCTCCTGGAAGAGGCTGGACGACATCCGGAACATCTTCTGGTGCCATAA
GACCTTCACTTCAGAGTACGTCACCGAGCATTGGTGTGAGGACAGCTTCTTTGGGTACCAGTACCTGAAT
GGTGTCAACCCTGTCATGCTTCATTGCCTCTCCAGCTTGCCCAGCAAGCTGCCTGTCACCAATGACATGG
TGGCACCTTTGCTGGGACCAGGCACCTGCCTACAAACAGAGCTAGAGAGGGGGCACATCTTCCTGGCGGA
CTACTGGATCCTGGCGGAGGCCCCAGTCCATTGCATAAACAGTCTCCAACAGTACGTAACAGCGCCCCTC
TGCCTGTTGTGGCTCAACCCACAGGGGGTGCTGCTGCCATTGGCAATCCAGCTCAGCCAGACACCAGGGC
CAGAGAGCCCCATCTTTCTGCCCACTGATTGCGAGTTGGACTGGCTGCTGGCCAAGACGTGGGTGCGCAA
CTCTGAGTTTTTGGTGCACGAGAACAACACGCATTTTCTGTGCACGCATTTGCTATGCGAGGCCTTCTCC
ATGGCTACACTGCGTCAGCTGCCGCTCTGTCATCCAGTCTACAAGCTCCTGCTTCCTCATACTCGCTACA
CGCTGCAAGTGAACACCATCGCAAGAGCCACGCTGCTCAACCCAGACGGCCTCGTGGACAAGGTCACGTC
CATCGGTAGGCAGGGCCTCATCTACCTCATGAGCACCGGGCTGGCCCACTTCACCTACACGGATTTCTGC
CTACCGGATAGCATACGGGCTCGTGGCGTCCTGACCATTCCCAACTACCACTACCGAGACGACGGTCTGA
AGATCTGGGCGGCTATTGAGAGGTTTGTCTCAGAGATTGTGAGTTACTATTATCCCAGCGATGCGTCTGT
GCAGCAGGACTGTGAACTGCAGGCCTGGGTGGGTGAGATTTTTGCTCAGGCGTTCCTCGGACGGGAAAGT
TCAGGCTTCCCAAGCCGGCTGTGCACCCCAGGAGAGCTCGTGAAGTATCTCACCGCAATCATCTTTAATT
GCTCCGCCCAGCACGCTGCGGTCAATAGTGGGCAGCATGACTTTGGGGCCTGGATGCCCAACGCCCCATC
ATCCATGAGGCAGCCTCCGCCTCAGACCAAGGGCGACACGACAATGAAGAGTTACCTAGACACCCTCCCA
GAGGTGAACACCACCTGTAGAAACCTTCTCCTCTTCTGGCTGGTCAGCCAAGAGCCAAAGGACCAGAGGC
CTCTGGGCACCTACCCAGATGAACACTTCACAGAGGAGGCCCCACGGCAGAGCATCGCAGCCTTCCAGAA
CTGCCTGGCCCAGATCTCAAAGGACATCAGGGAGCGCAACCAGAGCCTGGCACTGCCCTATGCCTACTTG
GATCCTCCACTCATTGAGAACAGTGTTTCCATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

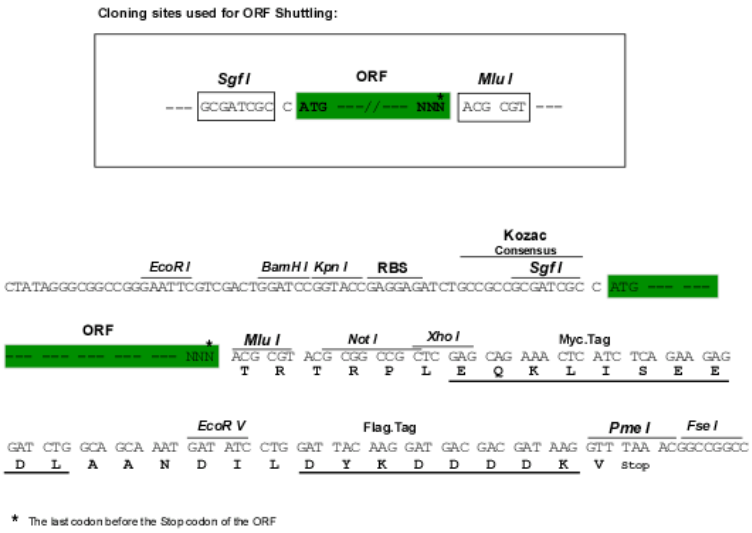
>MR225887 protein sequence
Red=Cloning site Green=Tags(s)

MAVYRLCVTTGSYLKAGTLDNIYATLVGTCGESPKQKLDRVGRDFASGSVQKYKVRCEAELGEILLLRLH
KERFAFFCKDPWYCSRICVTAPDGSAVHFPCYQWIDGYCTVELRPGTARTICQDSLPLLLDHRKRELRAR
QECYRWKIFAPGFPRMVDVSSFQEMESDKKFALTKTVPCAEQDDNSGNRYLPGFPMKIDIPSLLHMEPNI
RYSATKTASLIFNALPASFGMKIRGLLDRKGSWKRLDDIRNIFWCHKTFTSEYVTEHWCEDSFFGYQYLN
GVNPVMLHCLSSLPSKLPVTNDMVAPLLGPGTCLQTELERGHIFLADYWILAEAPVHCINSLQQYVTAPL
CLLWLNPQGVLLPLAIQLSQTPGPESPIFLPTDCELDWLLAKTWVRNSEFLVHENNTHFLCTHLLCEAFS
MATLRQLPLCHPVYKLLLPHTRYTLQVNTIARATLLNPDGLVDKVTSIGRQGLIYLMSTGLAHFTYTDFC
LPDSIRARGVLTIPNYHYRDDGLKIWAAIERFVSEIVSYYYPSDASVQQDCELQAWVGEIFAQAFLGRES
SGFPSRLCTPGELVKYLTAIIFNCSAQHAAVNSGQHDFGAWMPNAPSSMRQPPPQTKGDTTMKSYLDTLP
EVNTTCRNLLLFWLVSQEPKDQRPLGTYPDEHFTEEAPRQSIAAFQNCLAQISKDIRERNQSLALPYAYL
DPPLIENSVSI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_011786

ORF Size: 2136 bp

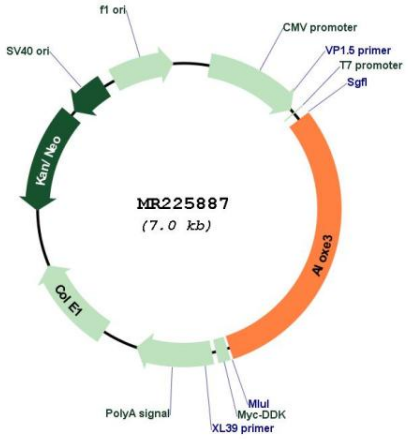
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_011786.1, NM_011786.2, NP_035916.2
RefSeq Size:	2538 bp
RefSeq ORF:	2136 bp
Locus ID:	23801
UniProt ID:	Q9WV07
Cytogenetics:	11 42.38 cM
MW:	80.5 kDa
Gene Summary:	Non-heme iron-containing lipoxygenase which is atypical in that it displays a prominent hydroperoxide isomerase activity and a reduced dioxygenase activity compared to other lipoxygenases. The hydroperoxide isomerase activity catalyzes the isomerization of hydroperoxides, derived from arachidonic and linoleic acid by ALOX12B, into hepoxilin-type epoxyalcohols. The dioxygenase activity requires a step of activation of the enzyme by molecular oxygen. In presence of oxygen, oxygenates polyunsaturated fatty acids, including arachidonic acid, to produce fatty acid hydroperoxides. In the skin, acts downstream of ALOX12B on the linoleate moiety of esterified omega-hydroxyacyl-sphingosine (EOS) ceramides to produce an epoxy-ketone derivative, a crucial step in the conjugation of omega-hydroxyceramide to membrane proteins. Therefore plays a crucial role in the synthesis of corneocytes lipid envelope and the establishment of the skin barrier to water loss. In parallel, it may have a signaling function in barrier formation through the production of hepoxilins metabolites. Plays also a role in adipocyte differentiation through hepoxilin A3 and hepoxilin B3 production which in turn activate PPARG. Through the production of hepoxilins in the spinal cord, it may regulate inflammatory tactile allodynia.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225887