

Product datasheet for **MC220771**

Aloxe3 (NM_011786) Mouse Untagged Clone

Product data:

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



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Fully Sequenced ORF: >MC220771 representing NM_011786
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCAGTATATCGGCTGTGTGACCCTGGTTCCTACCTGAAGGCTGGCACATTGGATAACATCTATG
 CTACATTGGTAGGCACCTGTGGTAAAAGCCCTAAGCAGAAGCTGGATCCGGTAGGCAGGGACTTCGCCTC
 TGGATCGGTTTCAAGTATAAAGGTGCGCTGTGAAGCAGAGCTGGGTGAGATCTTGCTGTTGCGCTTACAC
 AAGGAGCGCTTTGCTTTCTTCTGCAAGGACCCTTGGTACTGCAGTCAATCTGTGTCCTGCCCCGATG
 GCTCTGCTGTCCACTTTCCCTGTACCAGTGGATCGATGGCTACTGTACTGTGGAGCTGCGGCCAGGAAC
 AGCAAGAACCATCTGTCAGGATTCTTCCCTCCTTCTGGACCACAGGAAACGGGAACTCCAAGCCCGC
 CAAGAATGTTATCGCTGGAAGATCTTCCCTGGCTTCCCTCGGATGGTGGATGTCAGCAGCTTTCAGG
 AGATGGAGTCAGATAAGAAATTTGCCTTGACCAAGACAGTACCTTGTGCAGAACAGGATGACAACTGG
 GAACCGGTACCTGCCTGGCTTTCTATGAAGATTGACATCCCATCTCTGCTGCACATGGAACCAACATT
 CGATACTCAGCCACCAAGACGGCCTCACTGATCTTCAACGCCCTTCTGCATCCTTTGGCATGAAGATTC
 GAGGTCTCCTGGACCGCAAGGGCTCCTGGAAGAGGCTGGACGACATCCGGAACATCTTCTGGTGCCATAA
 GACCTTCACTTACAGTACGTACCCGAGCATTGGTGTGAGGACAGCTTCTTTGGGTACCGTACCTGAAT
 GGTGTCAACCCTGTATGCTTATTGCCTCTCCAGCTTGGCCAGCAAGCTGCCTGTACCAATGACATGG
 TGGCACCTTTGCTGGGACCAGGCACCTGCCTACAAACAGAGCTAGAGAGGGGGCACATCTTCTGGCGGA
 CTACTGGATCCTGGCGGAGGCCAGTCCATTGCATAAACGGTCTCCAACAGTACGTAACAGCGCCCTC
 TGCTGTTGTGGCTCAACCCACAGGGGGTGTGCTGCCATTGGCAATCCAGCTCAGCCAGACACCCAGGGC
 CAGAGAGCCCCATCTTTCTGCCACTGATTGCGAGTTGGACTGGCTGCTGGCCAAGACGTGGGTGGCGAA
 CTCTGAGTTTTTGGTGCACGAGAACAACACGCATTTTCTGTGCACGCATTTGCTATGCGAGGCCTTCTCC
 ATGGCTACACTGCGTCAGCTGCCCTCTGTATCCAGTCTACAAGCTCCTGCTTCTCATACTCGCTACA
 CGCTGCAAGTGAACACCATCGCAAGAGCCACGCTGCTCAACCCAGACGGCCTCGTGGACAAGGTCACGTC
 CATCGGTAGGCAGGGCCTCATCTACCTCATGAGCACCGGGCTGGCCACTTACCTACACGGATTCTGC
 CTACCGGATAGCATACGGGCTCGTGGCTCCTGACCATTCCCACTACCACTACCGAGACGACGGCCTGA
 AGATCTGGGCGGCTATTGAGAGTTTGTCTCAGAGATTGTGAGTACTATTATCCCAGCGATGCGTCTGT
 GCAGCAGGACTGTGAAGTGCAGGCTGGTGGGTGAGATTTTGTGCTCAGGCGTTCCTCGGACGGAAAGT
 TCAGGCTTCCCAAGCCGGCTGTGCACCCAGGAGACTCGTGAAGTATCTCACCGCAATCATCTTTAATT
 GCTCCGCCAGCAGCTGCGGTCAATAGTGGGCAGCATGACTTTGGGGCCTGGATGCCCAACGCCCCATC
 ATCCATGAGGCAGCTCCGCCTCAGACCAAGGGCGACACGACAATGAAGAGTTACCTAGACACCCTCCCA
 GAGGTGAACACCACCTGTAGAACTTCTCCTCTTCTGGCTGGTCAAGAGCCAAAGGACCAGAGAC
 CTCTGGGCACCTACCCAGATGAACACTTACAGAGGAGGCCCCACGGCAGAGCATCGCAGCTTCCAGAA
 CTGCCTGGCCAGATCTCAAAGGACATCAGGGAGCGCAACCAGAGCCTGGCACTGCCCTATGCCTACTTG
 GATCCTCCACTCATTGAGAACAGTGTTCATT**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_011786
Insert Size: 2136 bp

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:	<u>NM_011786.2</u> , <u>NP_035916.2</u>
RefSeq Size:	2538 bp
RefSeq ORF:	2136 bp
Locus ID:	23801
UniProt ID:	<u>Q9WV07</u>
Cytogenetics:	11 42.38 cM
Gene Summary:	<p>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]</p>