

Product datasheet for **RR211780**

Alox12b (NM_001039377) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Alox12b (NM_001039377) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Alox12b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RR211780 representing NM_001039377
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCACCTACAAAGTCAAGGTGGCCACGGGCACTGACTTCTTTTCGGGACGCTGGACTCAATTTCCC
 TGACCATCGTGGGCACCCAAGGAGAGAGCCATAAGCAGCGTTGAACCACTTTGGGAGAGACTTTGCCAC
 AGGGGCCGTGGATGACTACACAGTGCAGTGCCAGCAGGACCTGGGGGAGCTCATCATCATCCGTCTGCAC
 AAGGAGCCTATTCTTCTTACCCAAGGACCCCTGGTACTGCAACTATGTGCAGATCTGCGCTCCCAACT
 GTCGTGTCTACCACTTCCAGCTTACCAGTGGATGGATGGCTATGAGACCCTGTCACTCCGGGAGGCCAC
 AGGAAAGACAACAGCAGATGACACACTTCCCATCTTTTGAACACAGACAAGAAGAGATCAGAGCCAAG
 AAAGACTTCTACCACTGGAGGGTCTTTGTTCCCGCCTTCCCAACTATGTGGACATCCCCAGTTACCATC
 CTCCTCCAGACGGTGCCGAACCCCAACCGCCTGAGTGAATGGTTATATTCCAGGATTTCCAAATTCT
 CATCAACATTAAGGCCACCAGGTTCTTAAACTTAAATCTTCGTTTCTCCTTCGTCAGACAGCCTCCTTC
 TTCTACCGCCTAGGGCCATGGCACTGGCTTCAAGCTTCGTGGCCTGGTGGATCGCAAACGCTCTTGGA
 AGAGACTAAAGGACATTAAGAACATTTTCCCTGCTACCAAGACTGTCGTCTCTGAGTATGTGGCCGAGCA
 CTGGACTGAAGATAGCTTCTTTGGGTACCAGTACCTCAACGGCATCAACCCAGGCCATATCCGAAGATGC
 ATGCAGATCCCAGACAAGTTCCAGTTACAGATGAAATGGTGGCCCCATTCTGGGTGAAGGAACATGCC
 TGCAGGCAGAGCTGGAGAAGGGGAATATCTACCTGGCAGACTACCGCATCTTGGATGGCATCCCCACGGT
 GGAGCTCAATGGTCAGAAGCAGCATCACTGTGCCCGATCTGCTTGTCTGCACTTTGGTCCCGATGGTAAC
 ATGATGCCTATTGCCATTACGCTCAGCCAGACTCCTGGCCTGATTGTCCCATCTTCTGCTCAATGATT
 CTGAGTGGGACTGGCTGTTGGCTAAAACATGGGTACGCTACGCTGAGTTCTACAGCCACGAGGCCGTTGC
 CCATTAAGGAGTACCTCATCGGGGAAGCTTTCTGCTTGGCCCTCCTGAGGAACCTGCCCATGTGC
 CACCCCTGTATAAGCTCCTCATTCTCACACTCGCTACAACGTCCAGATCAACAGCATTGGGCGGGCCC
 TCCTTCTCAACAAAGGGGTCTCTCTGCCAGGGCCATGTCCTGGGCCTAGAGGGCTTCGCACAGGTGAT
 GGTTGGGGTCTGTCTGAGCTCACCTACAAAAGCCTCTGCATCCCCAATGACTTTGTGGAGCGGGGGTT
 CAGGATCTGCCTGGTATTATTTCCGTGACGACAGCTTGGCGGTGTGGTATGCCATGGAGAGGTACGTGA
 CAGAGATCATCACTTATTATTACCCGAATGACGCAGCTGTGGAGGGCGACCCGGAATTGCAGTCTGGGT
 GCAGGAGATATCAAGGAGTGTCTCCTGGAGCGTGAGAGCTCAGGTTTTCCACCTGCTTGCGAAGTGA
 CCTGAGCTGATCGAATACGTACGATGGTCATGTACACCTGCTCAGCGAGGCATGCAGCTGTCAACACAG
 GCCAGTTGGAATACACTTCTGGATGCCAACTTCCCGTCATCCATGAGGAACCCGCCGATGCAGTCCAA
 GGGGCTGACTACTTTGCAGACATTCATGGACACTTTGCCAGACGTGAAGACCACATGCATTGTGCTCTTG
 GTGCTCTGGACTCTCTGCCGGGAGCCTGATGACAGGCGGCCACTTGGCCACTTCCCGGACATCCATTTTG
 TGGAGGAGGCCCTCGGAGGAGTATGGAGGCTTTTCGTGAGAACCTCAACCAGATCTCTCACAACATCCG
 CCAGCGCAATAAGTGCCTCAACCTCCCGTATTACTACCTGGACCCGGTGTGATTGAGAACAGTATTTCC
 ATC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR211780 representing NM_001039377
 Red=Cloning site Green=Tags(s)

MATYKVKVATGTDFFSGTLDSISLTIIVGTQGESHKQRLNHFGDRDFATGAVDDYTVQCQDGLGELIIIRLH
 KEPHSFLPKDPWYCNYVQICAPNCRVYHFPAYQWMDGYETLSLREATGKTTADDTLPILLEHRQEEIRAK
 KDFYHWRVFPGLPNYVDIPSYHPPRRRCRNPNRPEWNGYIPGFPILINIKATRFLNLNLRFSFKTASF
 FYRLGPMALAFKLRGLVDRKRSWKRLKDIKNIFPATKTVVSEYVAEHWTESSFFGYQYLNGINPGHIRRC
 MQIPDKFPVTDEMVPFLGEGTCLQAELEKGNILADYRILDGIPVELNGQKHHCAPICLLHFGPDGN
 MMPAIAIQLSQTPGDCPIFLPNDEWDWLLAKTWVRYAEFYSHEAVAHLLLESHLIGEAFLALLRNLMPC
 HPLYKLLIPHTRYNVQINSIGRALLLNKGGLSARAMSLGLEGFAQVMVRGSELTYKSLCIPNDFVERGV
 QDLPGYYFRDDSLAVWYAMERYVTEIITYYPNDAAVEGDPELQCWVQEIFKECLLERESSGFPTCLRTV
 PELIEYVTMMYTCSARHAAVNTGQLEYTSWMPNFPSSMRNPPMQSKGLTTLQTFMDTLPDVKTTCCIVLL
 VLWTLCREPDDRRPLGHFPDIHFVEEAPRRSMEAFRQNLNQISHNIRQRNKCLNLPYYYYLDPVLIENSIS
 I

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001039377

ORF Size: 2103 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_001039377.1](#), [NP_001034466.1](#)

RefSeq Size: 2268 bp

RefSeq ORF: 2106 bp

Locus ID: 287425

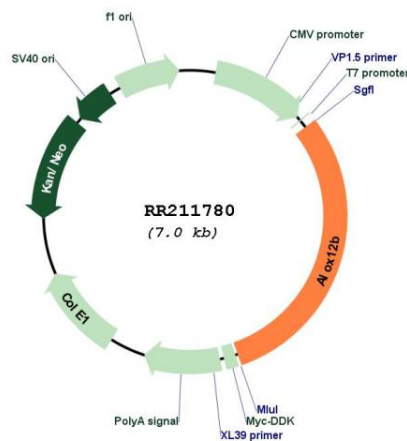
UniProt ID: [Q2KMM4](#)

Cytogenetics: 10q24

MW: 80.7 kDa

Gene Summary: Non-heme iron-containing dioxygenase that catalyzes the stereo-specific peroxidation of free and esterified polyunsaturated fatty acids generating a spectrum of bioactive lipid mediators. Mainly converts arachidonic acid to (12R)-hydroperoxyeicosatetraenoic acid/(12R)-HPETE and minor stereoisomers. In the skin, acts upstream of ALOXE3 on the lineolate 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. May also play a role in the regulation of the expression of airway mucins.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR211780