

## Product datasheet for **RN211780**

### Alox12b (NM\_001039377) Rat Untagged Clone

#### Product data:

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



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**Fully Sequenced ORF:** >RN211780 representing NM\_001039377  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCACCTACAAAGTCAAGGTGGCCACGGGCACTGACTTCTTTTCGGGACGCTGGACTCAATTTCCC  
 TGACCATCGTGGCACCACAGGAGAGGCCATAAGCAGCGTTGAACCACTTTGGGAGAGACTTTGCCAC  
 AGGGGCCGTGGATGACTACACAGTGCAGTGCCAGCAGGACCTGGGGGAGCTCATCATCATCCGTCTGCAC  
 AAGGAGCCTATTCTTCTTACCCAAGGACCCCTGGTACTGCAACTATGTGCAGATCTGCGCTCCCAACT  
 GTCGTGTCTACCACTTCCAGCTTACCAGTGGATGGCTATGAGACCCTGTCACTCCGGGAGGCCAC  
 AGGAAAGACAACAGCAGATGACACACTTCCCATCTTTTGAACACAGACAAGAAGAGATCAGAGCCAAG  
 AAAGACTTCTACCACTGGAGGTCTTTGTTCCCGCCTCCCAACTATGTGGACATCCCCAGTTACCATC  
 CTCCTCCAGACGGTGCCGAACCCCAACCGCCTGAGTGAATGGTTATATTCCAGGATTTCCAAATTCT  
 CATCAACATTAAGGCCACCAGGTTCTTAAACTTAAATCTTCGTTTCTCCTTCGTCAGACAGCCTCTTTC  
 TTCTACCGCCTAGGGCCATGGCACTGGCTTCAAGCTTCGTGGCTGGTGGATCGCAAACGCTCTTGGA  
 AGAGACTAAAGGACATTAAGAACATTTCCCTGCTACCAAGACTGTCGTCTCTGAGTATGTGGCCGAGCA  
 CTGGACTGAAGATAGCTTCTTTGGGTACCAGTACCTCAACGGCATCAACCCAGGCCATATCCGAAGATGC  
 ATGCAGATCCCAGACAAGTTCCAGTTACAGATGAAATGGTGGCCCCATTCTGGGTGAAGGAACATGCC  
 TGCAGGCAGAGCTGGAGAAGGGGAATATCTACCTGGCAGACTACCGCATCTTGGATGGCATCCCCACGGT  
 GGAGCTCAATGGTCAGAAGCAGCATCACTGTGCCCCGATCTGCTTGTCTGCACTTTGGTCCCGATGGTAAC  
 ATGATGCCTATTGCCATTACGCTCAGCCAGACTCCTGGCCTGATTGTCCCATCTTCTGCTCAATGATT  
 CTGAGTGGGACTGGCTGTTGGCTAAAACATGGGTACGCTACGCTGAGTTCTACAGCCACGAGCCGTTGC  
 CCATTAAGTGGAGATCACCTCATCGGGGAAGCTTTCTGCTTGGCCCTCCTGAGGAACCTGCCCATGTGC  
 CACCCCTGTATAAGCTCCTCATTCTCACAACGCTCCAGATCAACAGCATTGGGCGGGCCC  
 TCCTTCTCAACAAAGGGGTCTCTCTGCCAGGGCCATGTCCTGGGCTAGAGGGCTTCGCACAGGTGAT  
 GGTTCGGGTCTGTCTGAGCTCACCTACAAAAGCCTCTGCATCCCAATGACTTTGTGGAGCGGGGTT  
 CAGGATCTGCCTGGTATTATTTCCGTGACGACAGCTTGGCGGTGGTATGCCATGGAGAGGTACGTGA  
 CAGAGATCATCACTTATTATTACCCGAATGACGCAGCTGTGGAGGGCGACCCGAATTGCAGTCTGGGT  
 GCAGGAGATATCAAGGAGTGTCTCCTGGAGCGTGAGAGCTCAGGTTTTCCACCTGCTTCCGAAGTGA  
 CCTGAGCTGATCGAATACGTACGATGGTCATGTACACCTGCTCAGCGAGGCATGCAGCTGTCAACACAG  
 GCCAGTTGGAATACACTTCTGGATGCCAACTTCCCGTATCCATGAGGAACCCGCCGATGCAGTCCAA  
 GGGGCTGACTACTTTGCAGACATTCATGGACACTTTGCCAGACGTGAAGACCACATGCATTGTGCTCTTG  
 GTGCTCTGGACTCTGCGGGGAGCCTGATGACAGGCGGCCACTTGGCCACTTCCCGGACATCCATTTTG  
 TGGAGGAGGCCCTCGGAGGAGTATGGAGGCTTTTCGTCAGAACCTCAACCAGATCTCTCACAACATCCG  
 CCAGCGCAATAAGTGCCTCAACCTCCCGTATTACTACCTGGACCCGGTGTGATTGAGAACAGTATTTCC  
 ATCTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul

**ACCN:** NM\_001039377

**Insert Size:** 2106 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).

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001039377.1</a></u> , <u><a href="#">NP_001034466.1</a></u>
<b>RefSeq Size:</b>	2268 bp
<b>RefSeq ORF:</b>	2106 bp
<b>Locus ID:</b>	287425
<b>UniProt ID:</b>	<u><a href="#">Q2KMM4</a></u>
<b>Cytogenetics:</b>	10q24
<b>Gene Summary:</b>	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]