

Product datasheet for **RC212945**

ALOXE3 (NM_021628) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALOXE3 (NM_021628) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALOXE3
Synonyms:	ARCI3; E-LOX; eLOX-3; eLOX3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC212945 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGGCAGTGTACCGCCTGTGTGTGACCACTGGTCCCTACCTGAGGGCCGGCACACTGGACAACATCTCTG
TCACACTGGTGGGCACGTGTGGTAAAAGCCCAAGCAGCGGCTAGATCGAATGGGCAGGGACTTCGCCCC
TGGATCGGTACAGAAGTACAAGGTGCGTTGCACAGCGGAGCTGGGTGAGCTCTTGCTGCTGCGTGTACAC
AAGGAGCGCTACGCTTTCTCCGCAAGGACTCTTGGTACTGTAGCCGCATCTGTGTACCAGAACCGGATG
GTAGTGTATCCCCTTCCCCTGCTATCAGTGGATTGAAGGCTACTGCACCGTGGAGCTGAGGCCAGGAAC
AGCAAGAATAATTTGTCAGGACTCTCTCCCTCCTCCTGGATCACAGGACACGGGAGCTCCGGGCCGA
CAAGAATGCTACCGCTGGAAGATCTATGCCCTGGCTTCCCCTGCATGGTAGACGTCAACAGCTTTCAGG
AGATGGAGTCAGACAAGAAATTTGCCTTGACAAGACGACAATGTGTAGACCAGGGTGACAGCAGTGG
GAATCGGTACCTGCCCGCTTCCCCTGAAAATTTGACATCCCCTGATGTACATGGAGCCCAATGTT
CGATACTCAGCCACCAAGACGATCTCGCTGCTTCAATGCCATCCCTGGCTCCTTGGGAATGAAGCTTC
GAGGGCTGTTGGATCGCAAGGGCTCCTGGAAGAAGCTGGATGACATGCAGAACATCTTCTGGTGCCATAA
GACCTTACGACAAAAGTATGTCACAGAGCACTGGTGTGAAGATCACTTCTTTGGGTACCAGTACCTGAAT
GGTGTCAATCCCCTCATGCTCCACTGCATCTCTAGCTTGGCCAGCAAGCTGCCTGTACCAATGACATGG
TGGCCCCCTTGTGGGACAGGACACATGCTGCAGACAGAGCTAGAGAGGGGGAACATCTTCTAGCGGA
CTACTGGATCCTGGCGGAGGCCCCACCACTGCCTAACGGCCGCCAGCAGTACGTGGCCGCCCACTG
TGCTGCTGTGGCTCAGCCCCAGGGGGCGTGGTGCCCTTGGCCATCCAGCTCAGCCAGACCCCGGGC
CTGACAGCCCCATCTTCTGCCACTGACTCCGAATGGGACTGGCTGCTGGCCAAGACGTGGGTGCGCAA
CTCTGAGTTCCTGGTGCACGAAAACAACACGCACTTCTGTGCACGCATTTGCTGTGCGAGGCCTTCGCC
ATGGCCACGCTGCGCCAGCTGCCGCTCTGCCACCCATCTACAAGCTCCTACTCCCCCACTCGATACA
CGCTGCAGGTGAACACCATCGCGAGGGCCACGCTGCTCAACCCGAGGGCCTCGTGGACCAGGTACGCTC
CATCGGGAGGCAAGGCCTCATCTACCTCATGAGCACGGGCTGGCCACTTACCTACACCAATTTCTGC
CTTCCGGACAGCCTGCGGGCCCGCGGCTCCTGGCTATCCCCAACTACCACTACCGAGACGACGGCCTGA
AGATCTGGGCGGCCATTGAGAGCTTTGTCTCAGAAATCGTGGGCTACTATTATCCCAGTGACGCATCTGT
GCAGCAGGATTCGGAGCTGCAGGCTGGACTGGCGAGATTTTGTCTCAGGCGTTCCTGGCCGGGAAAGC
TCAGGTTTCCCAAGCCGGCTGTGCACCCAGGAGAGATGGTGAAGTTCTCACTGCAATCATCTTCAATT
GCTCTGCCAGCAGCTGCTGTCAACAGTGGGCAGCATGACTTTGGGGCCTGGATGCCCAATGCTCCATC
ATCCATGAGGCAGCCCCACCCAGACCAAGGGGACCACCACCCTGAAGACTTACCTAGACACCCTCCCT
GAAGTGAACATCAGCTGTAAACCTCCTCCTTCTGTTGGTTAGCCAAGAACCAAGGACCAGAGGC
CCCTGGGCACCTACCCAGATGAGCACTTACAGAGGAGGCCCCGAGGCGGAGCATCGCCGCTTCCAGAG
CCGCTGGCCAGATCTCAAGGGACATCCAGGAGCGGAACCAGGGTCTGGCACTGCCCTACACCTACCTG
GACCTCCCCTCATTGAGAACAGCGTCTCCATC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC212945 protein sequence
Red=Cloning site Green=Tags(s)

MAVYRLCVTTGPYLRAGTLDNISVTLVGTGCGESPKQLDRMGRDFAPGSVQKYKVRCTAELGELLLLRVH
 KERYAFRRKDSWYCSRICVTEPDGSVSHFPCYQWIEGYCTVELRPGTARTICQDSLPLLLDHRTELRAR
 QECYRWKIYAPGFPCMDVNSFQEMESDKKFALTKTTTCVDQGDSSGNRYLPGFPMKIDIPSLMYMEPNV
 RYSATKTIISLLFNAIPASLGMKLRGLLDRKGSWKKLDDMQNIFWCHKTFITTKYVTEHWCEDHFFGYQYLN
 GVNPMVLMHCISLPSKLPVTNDMVAPLLGQDTCQLQTELERGNIFLADYWILAEAPTHCLNQRQYVAAPL
 CLLWLSPQALVPLAIQLSQTPGPDSPIFLPTDSEWDWLLAKTWVRNSEFLVHENNTFLCTHLLCEAFA
 MATLRQLPLCHPIYKLLLPHTRYTLQVNTIARATLLNPEGLVDQVTSIGRQGLIYLMSTGLAHFTYTNFC
 LPDSLRLARGVLAIPNYHYRDDGLKIWAIESEVSEIVGYYPSPASVQQDSELQAWTGEIFAQAFLGRES
 SGFPSRLCTPGEMVKFLTAIIFNCSAQHAAVNSGQHDFGAWMPNAPSSMRQPPPQTGTTLTKTYLDTLP
 EVNISCNNLLLFWLVSQEPKQRPPLGTYPDEHFTEEAPRRSIAAFQSRLAQISRDIQERNQGLALPYTYL
 DPPLIENSVSI

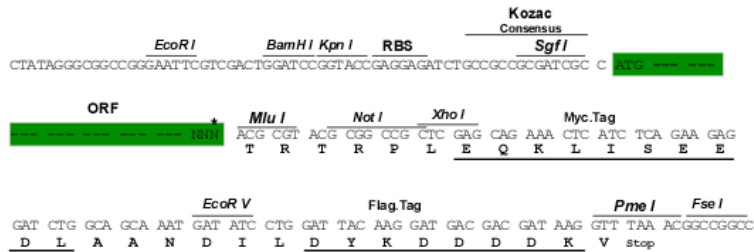
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6554_d12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_021628

ORF Size: 2133 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_021628.3](#)

RefSeq Size: 3251 bp

RefSeq ORF: 2136 bp

Locus ID: 59344

UniProt ID: [Q9BYJ1](#)

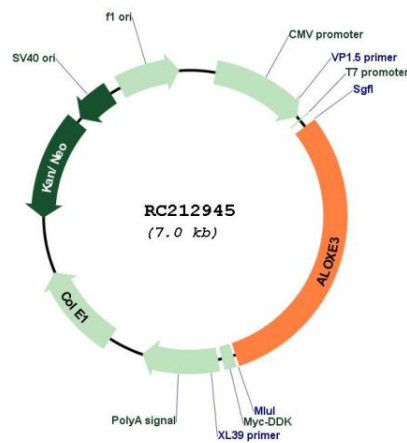
Cytogenetics: 17p13.1

Protein Families: Druggable Genome

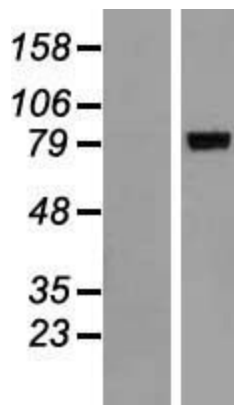
MW: 80.5 kDa

Gene Summary:

This gene is a member of the lipoxygenase family, which are catabolized by arachidonic acid-derived compounds. The encoded enzyme is a hydroperoxide isomerase that synthesizes a unique type of epoxy alcohol (8R-hydroxy-11R,12R-epoxyeicosa-5Z,9E,14Z-trienoic acid) from 12R-hydroperoxyeicosatetraenoic acid (12R-HPETE). This epoxy alcohol can activate the nuclear receptor peroxisome proliferator-activated receptor alpha (PPARalpha), which is implicated in epidermal differentiation. Loss of function of the enzyme encoded by this gene results in ichthyosis, implicating the function of this gene in the differentiation of human skin. This gene is part of a cluster of lipoxygenase genes on 17p13.1. Mutations in this gene result in nonbullous congenital ichthyosiform erythroderma (NCIE). Multiple transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009]

Product images:


Circular map for RC212945



Western blot validation of overexpression lysate (Cat# [LY411955]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212945 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).