

Product datasheet for **RG233017**

5 Lipoxygenase (ALOX5) (NM_001256154) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	5 Lipoxygenase (ALOX5) (NM_001256154) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALOX5
Synonyms:	5-LO; 5-LOX; 5LPG; LOG5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG233017 representing NM_001256154
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCCCTCTACACGGTACCGTGGCCACTGGCAGCCAGTGGTTCGCCGGCACTGACGACTACATCTACC
 TCAGCCTCGTGGGCTCGGCGGGCTGCAGCGAGAAGCACCTGCTGGACAAGCCCTTCTACAACGACTTCGA
 CGGTGGCGCGGTGGATTCATACGACGTGACTGTGGACGAGGAAGTGGGCGAGATCCAGCTGGTCAGAATC
 GAGAAGCGCAAGTACTGGCTGAATGACGACTGGTACCTGAAGTACATCACGCTGAAGACGCCCCACGGGG
 ACTACATCGAGTCCCCTGCTACCCTGGATCACCGGCGATGTCGAGGTTGCTCTGAGGGATGGACGCGC
 AAAGTTGGCCGAGATGACCAAATTCACATTCTCAAGCAACACCGACGTAAGAAGTGGAAAACACGGCAA
 AAACAATATCGATGGATGGAGTGAACCTGGCTTCCCCTTGAGCATCGATGCCAAATGCCACAAGGATT
 TACCCCGTGATATCCAGTTTGTAGTAAAAAGGAGTGGACTTTGTTCTGAATTACTCAAAGCGATGGA
 GAACCTGTTCAACCGCTTCATGCACATGTTCCAGTCTTCTTGAATGACTTCGCCGACTTTGAGAAA
 ATCTTTGTCAAGATCAGCAACACTATTTCTGAGCGGGTCATGAATCACTGGCAGGAAGACCTGATGTTG
 GCTACCAGTTCCTGAATGGCTGCAACCCTGTGTTGATCCGGCGCTGCACAGAGCTGCCCGAGAAGCTCCC
 GGTGACCACGGAGATGGTAGAGTGCAGCCTGGAGCGGCAGCTCAGCTTGGAGCAGGAGGTCCAGCAAGGG
 AACATTTTCATCGTGGACTTTGAGCTGTGGATGGCATCGATGCCAACAAAACAGACCCCTGCACACTCC
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 GCTCAACCAATCCCGGGAGATGAGAACCCTATTTTCCCTTCGGATGCAAAAACGACTGGCTTTTG
 GCCAAAATCTGGGTGCGTCCAGTGACTCCACGTCCACCAGACCATACCCACCTTCTGCGAACACATC
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 GGTGGCACACGTGAGATTCAACATTGCAATCAACACCAAGGCCCGTGGAGCAGTCACTGCGGAGTGTGGC
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 CTACTACTTACCGGGACGACGGGCTCCTGGTGTGGGAAGCCATCAGGACGTTACGGCCGAGGTGGTA
 GACATCTACTACGAGGGCGACAGGTGGTGGAGGAGGACCCGGAGCTGCAGGACTTCGTGAACGATGTCT
 ACGTGTACGGCATGCGGGGCCGCAAGTCTCAGGCTTCCCAAGTCGGTCAAGAGCCGGGAGCAGCTGTC
 GGAGTACCTGACCGTGGTATCTTACCCTCCGCCAGCACGCCGCGTCAACTTCGGCCAGCTGTTT
 CTGGGCATGTACCCAGAAGAGCATTTTATCGAGAAGCCTGTGAAGGAAGCCATGGCCGATTCCGCAAGA
 ACCTCGAGGCCATTGTCAGCGTATTGCTGAGCGCAACAAGAAGAGCAGCTGCCATATTACTACTGTGTC
 CCCAGACCGGATTCCGAACAGTGTGGCCATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG233017 representing NM_001256154
 Red=Cloning site Green=Tags(s)

MPSYTVTVATGSQWVAGTDDYIYLSLVGSAGCSEKHLLDKPFYNDFERGAVDSYDVTVDEELGEIQLVRI
 EKRYWLNDDWYLKYITLKTTPHGDYIEFPCYRWITGDVEVVLDRGAKLARDDQIHLKQHRRKELETRQ
 KQYRWMWNPWFPLSIDAKCHKDLPRDIQFDSEKGVDFVLYNSKAMENLFINRFMHMFQSSWNDFADFEK
 IFVKISNTISERVMNHQEDLMFGYQFLNGCNPVLIIRCTELPEKLPVTTEMVECSLERQLSLEQEVQQG
 NIFIVDFELLDGIDANKDPTLQFLAAPICLLYKNLANKIVPIAQLNQIPGDNPIFLPSDAKYDWLL
 AKIWRSSDFHWHQTIITHLLRTHLVSEVFGIAMYRQLPAVHPIFKLLVAHVRFITIAINTKAREQLICECG
 LFDKANATGGGGHVQMVQRAMKDLTYASLCFPEAIKARGMESKEDIPIYFYRDDGLLVWEAIRTFTAQV
 DIYYEGDQVVEEDPELQDFVNDVYVYGMGRKSSGFPSVKSREQLSEYLTVVIFITASAQHAAVNFGQLF
 LGMYPEEHFIEKPVKEAMARFRKNLEAIVSVIAERNKKKQLPYYYLSPDRIPNSVAI

TRTRPLE - GFP Tag - V

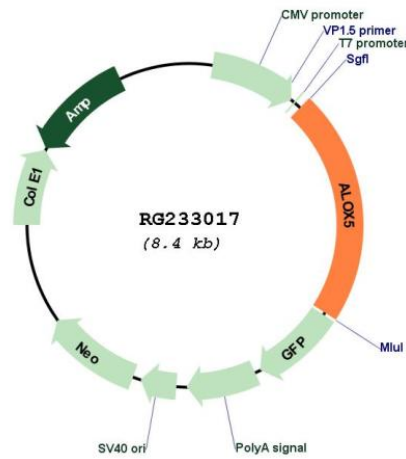
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001256154

ORF Size: 1851 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:	<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:	NM_001256154.2
RefSeq Size:	2410 bp
RefSeq ORF:	1854 bp
Locus ID:	240
UniProt ID:	P09917
Cytogenetics:	10q11.21
Protein Families:	Druggable Genome
Protein Pathways:	Arachidonic acid metabolism, Metabolic pathways
Gene Summary:	This gene encodes a member of the lipoxygenase gene family and plays a dual role in the synthesis of leukotrienes from arachidonic acid. The encoded protein, which is expressed specifically in bone marrow-derived cells, catalyzes the conversion of arachidonic acid to 5(S)-hydroperoxy-6-trans-8,11,14-cis-eicosatetraenoic acid, and further to the allylic epoxide 5(S)-trans-7,9-trans-11,14-cis-eicosatetraenoic acid (leukotriene A4). Leukotrienes are important mediators of a number of inflammatory and allergic conditions. Mutations in the promoter region of this gene lead to a diminished response to antileukotriene drugs used in the treatment of asthma and may also be associated with atherosclerosis and several cancers. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]