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Product datasheet for RC233049

5 Lipoxygenase (ALOX5) (NM_001256153) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	5 Lipoxygenase (ALOX5) (NM_001256153) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALOX5
Synonyms:	5-LO; 5-LOX; 5LPG; LOG5
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

ORF Nucleotide Sequence:

>RC233049 representing NM_001256153
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCTCCTACACGGTCACCGTGGCCACTGGCAGCCAGTGGTTCGCCGGCACTGACGACTACATCTACC
TCAGCCTCGTGGGCTCGGCGGGCTGCAGCGAGAAGCACCTGCTGGACAAGCCCTTCTACAACGACTTCGA
GCGTGGCGCGGTGGATTCATACGACGTGACTGTGGACGAGGAACTGGGCGAGATCCAGCTGGTCAGAATC
GAGAAGCGCAAGTACTGGCTGAATGACGACTGGTACCTGAAGTACATCACGCTGAAGACGCCCCACGGGG
ACTACATCGAGTTCCCCTGCTACCGCTGGATCACCGGCGATGTCGAGGTTGTCCTGAGGGATGGACGCGC
AAAGTTGGCCCGAGATGACCAAATTCACATTCTCAAGCAACACCGACGTAAAGAACTGGAAACACGGCAA
AAACAATATCGATGGATGGAGTGGAACCCTGGCTTCCCCTTGAGCATCGATGCCAAATGCCACAAGGATT
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ATCTTTGTCAAGATCAGCAACACTATTTCTGAGCGGGTCATGAATCACTGGCAGGAAGACCTGATGTTTG
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GGTGACCACGGAGATGGTAGAGTGCAGCCTGGAGCGGCAGCTCAGCTTGGAGCAGGAGGTCCAGCAAGGG
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AGTTCCTGGCCGCTCCCATCTGCTTGCTGTATAAGAACCTGGCCAACAAGATTGTCCCCATTGCCATCCA
GCTCAACCAAATCCCGGGAGATGAGAACCCTATTTTCCTCCCTTCGGATGCAAAATACGACTGGCTTTTG
GCCAAAATCTGGGTGCGTTCCAGTGACTTCCACGTCCACCAGACCATCACCCACCTTCTGCGAACACATC
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GGTGGCACACGTGAGATTCACCATTGCAATCAACACCAAGGCCCGTGAGCAGCTCATCTGCGAGTGTGGC
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GGTGGAGGAGGACCCGGAGCTGCAGGACTTCGTGAACGATGTCTACGTGTACGGCATGCGGGGCCGCAAG
TCCTCAGGCTTCCCCAAGTCGGTCAAGAGCCGGGAGCAGCTGTCGGAGTACCTGACCGTGGTGATCTTCA
CCGCCTCCGCCCAGCACGCCGCGGTCAACTTCGGCCAGTACGACTGGTGCTCCTGGATCCCCAATGCGCC
CCCAACCATGCGAGCCCCGCCACCGACTGCCAAGGGCGTGGTGACCATTGAGCAGATCGTGGACACGCTG
CCCGACCGCGGCCGCTCCTGCTGGCATCTGGGTGCAGTGTGGGCGCTGAGCCAGTTCCAGGAAAACGAGC
TGTTCCTGGGCATGTACCCAGAAGAGCATTTTATCGAGAAGCCTGTGAAGGAAGCCATGGCCCGATTCCG
CAAGAACCTCGAGGCCATTGTCAGCGTGATTGCTGAGCGCAACAAGAAGAAGCAGCTGCCATATTACTAC
TTGTCCCCAGACCGGATTCCGAACAGTGTGGCCATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

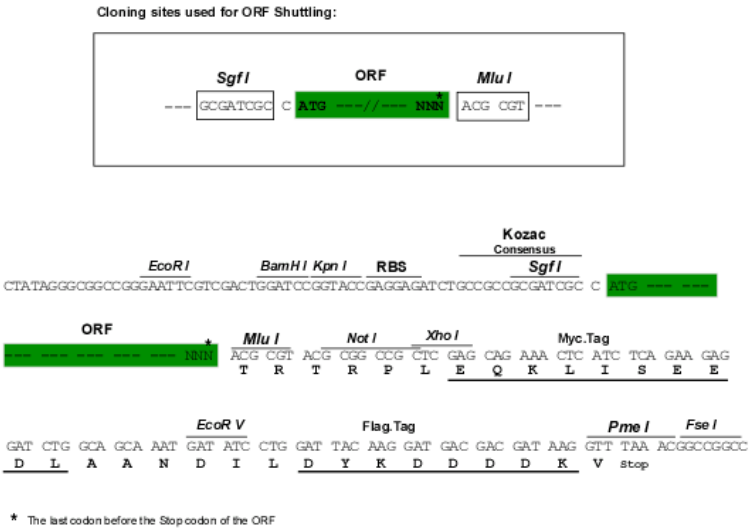
>RC233049 representing NM_001256153
Red=Cloning site Green=Tags(s)

MPSYTVTVATGSQWFAGTDDYIYLSLVGSAGCSEKHLLDKPFYNDFERGAVDSYDVTVDEELGEIQLVRI
EKRKYWLNDDWYLKYITLKTPHGDYIEFPCYRWITGDVEVVLRDGRAKLARDDQIHILKQHRRKELETRQ
KQYRWMEWNPGFPLSIDAKCHKDLPRDIQFDSEKGVDFVLNYSKAMENLFINRFMHMFQSSWNDFADFEK
IFVKISNTISERVMNHWQEDLMFGYQFLNGCNPVLIRRCTELPEKLPVTTEMVECSLERQLSLEQEVQQG
NIFIVDFELLDGIDANKTDPCTLQFLAAPICLLYKNLANKIVPIAIQLNQIPGDENPIFLPSDAKYDWLL
AKIWVRSSDFHVHQTITHLLRTHLVSEVFGIAMYRQLPAVHPIFKLLVAHVRFTIAINTKAREQLICECG
LFDKARGMESKEDIPYYFYRDDGLLVWEAIRTFTAEVVDIYYEGDQVVEEDPELQDFVNDVYVYGMRGRK
SSGFPKSVKSREQLSEYLTVVIFTASAQHAAVNFGQYDWCSWIPNAPPTMRAPPPTAKGVVTIEQIVDTL
PDRGRSCWHLGAVWALSQFQENELFLGMYPEEHFIEKPVKEAMARFRKNLEAIVSVIAERNKKKQLPYYY
LSPDRIPNSVAI

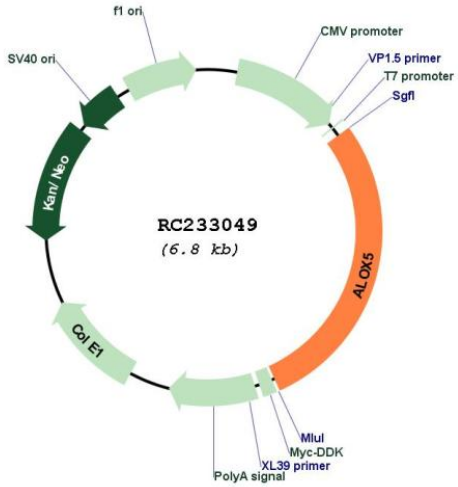
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001256153
ORF Size:	1926 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_001256153.3

RefSeq Size:	2485 bp
RefSeq ORF:	1929 bp
Locus ID:	240
UniProt ID:	P09917
Cytogenetics:	10q11.21
Protein Families:	Druggable Genome
Protein Pathways:	Arachidonic acid metabolism, Metabolic pathways
MW:	75.1 kDa
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-eicosatetrenoic 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]