

## Product datasheet for **SC316253**

### 5 Lipoxygenase (ALOX5) (NM\_000698) Human Untagged Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                                     |
| Product Name:             | 5 Lipoxygenase (ALOX5) (NM_000698) Human Untagged Clone |
| Tag:                      | Tag Free  |
| Symbol:                   | 5 Lipoxygenase  |
| Synonyms:                 | 5-LO; 5-LOX; 5LPG; LOG5                                 |
| Mammalian Cell Selection: | None  |
| Vector:                   | <u><a href="#">pCMV6-XL4</a></u>                        |
| E. coli Selection:        | Ampicillin (100 ug/mL)                                  |



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**Fully Sequenced ORF:**

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>OriGene sequence for NM_000698 edited
CTGCGGCGCTAGATGCGGACACCTGGACCGCCGCGCCGAGGCTCCCGGCGCTCGCTGCTC
CCGCGGCCCGCGCCATGCCCTCTACACGGTCACCGTGGCCACTGGCAGCCAGTGGTTCCG
CCGGCACTGACGACTACATCTACCTCAGCCTCGTGGGCTCGGCGGGCTGCAGCGAGAAGC
ACCTGTGGACAAGCCCTTCTACAACGACTTCGAGCGTGGCGGGTGGATTTCATACGACG
TGACTGTGGACGAGGAAGTGGGCGAGATCCAGCTGGTCAAGTTCGAGAAGCGCAAGTACT
GGCTGAATGACGACTGGTACCTGAAGTACATCACGCTGAAGACGCCCCACGGGGACTACA
TCGAGTTCCCCTGCTACCGCTGGATCACCGGCGATGTCGAGGTTGCTGAGGGATGGAC
GCGCAAAGTTGGCCCGAGATGACCAAATTCACATTCTCAAGCAACACCGACGTAAAGAAC
TGGAAACACGGCAAAAACAATATCGATGGATGGAGTGGAAACCCTGGCTTCCCCTTGAGCA
TCGATGCCAAATGCCACAAGGATTTACCCCGTGATATCCAGTTTGATAGTAAAAAGGAG
TGGACTTTGTTCTGAATTACTCCAAAGCGATGGAGAACCCTGTTTCATCAACCGCTTCATGC
ACATGTTCCAGTCTTCTTGAATGACTTCGCCGACTTTGAGAAAATCTTTGTCAAGATCA
GCAACACTATTTCTGAGCGGGTCATGAATCACTGGCAGGAAGACCTGATGTTTGGCTACC
AGTTTCTGAATGGCTGCAACCCTGTGTTGATCCGGCGCTGCACAGAGCTGCCCGAGAAGC
TCCCGGTGACCACGGAGATGGTAGAGTGCAGCCTGGAGCGGCAGCTCAGCTTGGAGCAGG
AGGTCCAGCAAGGGAACATTTTCATCGTGGACTTTGAGCTGCTGGATGGATCGATGCCA
ACAAAACAGACCCTGCACACTCCAGTTCCTGGCCGCTCCCATCTGCTTGTGTATAAGA
ACCTGGCCAACAAGATTGCCCCATTGCCATCCAGCTCAACCAAAATCCCGGGAGATGAGA
ACCCTATTTTCTCCCTTCGGATGCAAAAATACGACTGGCTTTTGGCCAAAATCTGGGTGC
GTTCCAGTGACTTCCACGTCCACCAGACCATCACCCACCTTCTGCGAACACATCTGGTGT
CTGAGGTTTTTGGCATTGCAATGTACCGCCAGCTGCCTGCTGTGCACCCCAATTTCAAGC
TGCTGGTGGCACACGTGAGATTACCAATTGCAATCAACACCAAGGCCCGTGGCAGCTCA
TCTGCGAGTGTGCCTCTTTGACAAGGCCAACGCCACAGGGGGCGGTGGGCACGTGCAGA
TGGTGCAGAGGGCCATGAAGGACCTGACCTATGCCTCCCTGTGCTTTCCCGAGGCCATCA
AGGCCCGGGGCATGGAGAGCAAAGAAGACATCCCCTACTACTTCTACCGGACGACGGGC
TCCTGGTGTGGGAAGCCATCAGGACGTTACGGCCGAGGTGGTAGACATCTACTACGAGG
GCGACCAGGTGGTGGAGGAGGACCCGGAGCTGCAGGACTTCGTGAACGATGTCTACGTGT
ACGGCATGCGGGGCCGAAGTCTCAGGCTTCCCAAGTCGGTCAAGAGCCGGGAGCAGC
TGTCGGAGTACCTGACCGTGGTGTCTTACCGCCTCCGCCAGCAGCCCGGTCAACT
TCGGCCAGTACGACTGGTGTCTCCTGGATCCCCAATGCGCCCCAACCATGCGAGCCCCGC
CGCCGACTGCCAAGGGCGTGGTACCATTGAGCAGATCGTGGACACGCTGCCCGACCGCG
GCCGCTCCTGCTGGCATCTGGGTGCAAGTGTGGGCGCTGAGCCAGTTCCAGGAAAACGAGC
TGTTTCTGGGCATGTACCCAGAAGAGCATTTTATCGAGAAGCCTGTGAAGGAAGCCATGG
CCCATTCCGCAAGAACCCTCGAGGCCATTGTCAGCGTGATTGCTGAGCGCAACAAGAAGA
AGCAGTGCCATATTACTACTTGTCCCCAGACCGGATCCGAACAGTGTGGCCATCTGAG
CACACTGCCAGTCTCACTGTGGGAAGGCCAGCTGCCCCAGCCAGATGGACTCCAGCCTGC
CTGGCAGGCTGTCTGGCCAGGCCCTTTGGCAGTCACATCTTTCTCCGAGGCCAGTACC
TTTCCATTTATTCTTTGATCTTCAGGAACTGCATAGATTGATCAAAGTGTAAACACCAT
AGGGACCCATTCTACACAGAGCAGGACTGCACAGCGTCCGTCCACACCCAGCTCAGCAT
TTCCACACCAAGCAGCAACAGCAAAATCACGACCACTGATAGATGTCTATTCTTGTGGAG
ACATGGGATGATTATTTCTGTTCTATTTGTGCTTAGTCCAATTCCTTGCACATAGTAGG
TACCCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT
CATTTAAACAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAA
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|-------------------------------------|--|
| <b>5' Read Nucleotide Sequence:</b> | <p>&gt;OriGene 5' read for NM_000698 unedited</p> <pre> NGGGTTACATTTGTATACGACTCACTATAGGCGGCCGCGAAATTCGCACGAGCTGCGGC GCTAGATGCGGACACCTGGACCGCCGCGCCGAGGCTCCCGGCGCTCGCTGCTCCCGCGGC CCGCGCCATGCCCTCCTACACGGTCACCGTGGCCACTGGCAGCCAGTGGTTGCGCCGGCAC TGACGACTACATCTACCTCAGCCTCGTGGGCTCGGCGGGCTGCAGCGAGAAGCACCTGT GGACAAGCCCTTCTACAACGACTTCGAGCGTGGCGGGTGGATTACATACGACGTGACTGT GGACGAGGAACCTGGCGGAGATCCAGCTGGTCAGAATCGAGAAGCGCAAGTACTGGCTGAA TGACGACTGGTACCTGAAGTACATCACGCTGAAGACGCCCCACGGGGACTACATCGAGTT CCCTGCTACCGCTGGATCACCGCGATGTCGAGTTGTCCTGAGGGATGGACGCGCAA GTTGGCCCGAGATGACCAAATTCACATTCTCAAGCAACACCGACGTAAAGAACTGGAAAC ACGGCAAAAACAATATCGATGGATGGAGTGAACCCCTGGCTTCCCTTGAGCATCGATGC CAAATGCCACAAGGATTTACCCCGTGATATCCAGTTTGATAGTAAAAAGGAGTGGACTT TGTTCTGAATTACTCAAAGCGATGGAGAACCTGTTTCATCAACCGCTTCATGCACATGTT CCAGTCTTCTTGAATGACTTCGCCGACTTTGAGAAAATCTTTGTCAAGATCAGCAACAC TATTTCTGAGCGGGTCATGAATCACTGGCAGGAAGACCTGATGTTTGGCTACCAGTTCCT GAATGGGCTGCACCCCTGTGTGATCCGCGCTGCACAGAGCTGCCCGAGAGCTCCGGTG ACCACGNAGATGGTAAAGTGCANCTGGAGCGGCAGCTCAACTGGAGCCAGAGGTCCCG AN </pre> |
| <b>3' Read Nucleotide Sequence:</b> | <p>&gt;Forward primer walk for NM_000698 unedited</p> <pre> CTTTTGCCACTCCGAGGCTCAAGGCCCGGGGCACTGAGAGCAAAGAAGACATCCCTT ACTACTCTACCGGGACGACGGGCTCCTGGTGTGGGAAGCCATCAGGACGTTACGGCCG AGGTGGTAGACATCTACTACGAGGGCGACCAGGTGGTGGAGGAGACCCCGAGCTGCAGG ACTTCGTGAACGATGTCTACGTGTACGGCATGCGGGGCCCAAGTCTCAGGCTTCCCA AGTCGGTCAAGAGCCGGGAGCAGCTGTCGGAGTACCTGACCGTGGTGTCTTACCGCCT CCGCCCAGCAGCCGCGGTCAACTTCGGCCAGTACGACTGGTGTCTCTGGATCCCAATG CGCCCCAACCATGCGAGCCCGCCGCGACTGCCAAGGGCGTGGTGACCATTGAGCAGA TCGTGGACACGCTGCCCGACCGCGGCTCCTGCTGGCATCTGGGTGCAGTGTGGGCGC TGAGCCAGTTCAGGAAAACGAGCTGTTCTGGGCATGTACCCAGAAGAGCATTATTCG AGAAGCCTGTGAAGGAAGCCATGGCCCGATTCCGCAAGAACCTCGAGGCCATTGTCAGCG TGATTGCTGAGCGCAACAAGAAGAAGCAGCTGCCATATTAATACTTGTCCCAGACCGGA TTCCGAACAGTGTGGCCATCTGAGCACACTGCCAGTCTACTGTGGGAAGGCCAGCTGCC CCAGCCAGATGGACTCCAGCCTGCCTGGCAGCTGTCTGGCCAGGCCTCTTGGCAGTCACA TCTCTTCTCCGAGGCCAGTACCTTTCCATTTATTCTTTGATCTTCAGGGAAGTGCATAG ATTGATCAAAGTGTAAACACCATAGGGACCCATTCTACACAGAGCAGACTGCACAGCGTC CTGTCCACACCCAGCTCAGCATTCCACACCAGCAGCACAGCAATCACGACCACTGATAG ATGTCTA </pre>       |
| <b>Restriction Sites:</b>           | NotI-NotI  |
| <b>ACCN:</b>                        | NM_000698  |
| <b>Insert Size:</b>                 | 2600 bp  |
| <b>OTI Disclaimer:</b>              | 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>OTI Annotation:</b>              | The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.  |

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|-------------------------------|---|
| <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>                | <a href="#">NM_000698.2</a> , <a href="#">NP_000689.1</a>   |
| <b>RefSeq Size:</b>           | 2568 bp   |
| <b>RefSeq ORF:</b>            | 2025 bp   |
| <b>Locus ID:</b>              | 240   |
| <b>UniProt ID:</b>            | <a href="#">P09917</a>  |
| <b>Cytogenetics:</b>          | 10q11.21  |
| <b>Domains:</b>               | lipoxygenase, PLAT  |
| <b>Protein Families:</b>      | Druggable Genome  |
| <b>Protein Pathways:</b>      | Arachidonic acid metabolism, Metabolic pathways   |
| <b>Gene Summary:</b>          | <p>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]</p> <p>Transcript Variant: This variant (1) encodes the longest isoform (1).</p> |