

## Product datasheet for **SC127912**

### **MBOAT2 (NM\_138799) Human Untagged Clone**

#### **Product data:**

|                           |                                      |
|---------------------------|--------------------------------------|
| <b>Product Type:</b>      | Expression Plasmids                  |
| <b>Tag:</b>               | Tag Free                             |
| <b>Symbol:</b>            | MBOAT2                               |
| <b>Synonyms:</b>          | LPAAT; LPCAT4; LPEAT; LPLAT 2; OACT2 |
| <b>Mammalian Cell</b>     | None                                 |
| <b>Selection:</b>         |                                      |
| <b>Vector:</b>            | <u>pCMV6-XL4</u>                     |
| <b>E. coli Selection:</b> | Ampicillin (100 ug/mL)               |



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**Fully Sequenced ORF:** >OriGene ORF within SC127912 sequence for NM\_138799 edited (data generated by NextGen Sequencing)

ATGGCCACCACCAGCACCAGGGCTCCACCCTGCTGCAGCCCCTCAGCAACGCCGTGCAG  
 CTGCCCATCGACCAGGTCAACTTTGTAGTGTGCCAACTCTTTGCCTTGCTAGCAGCCATT  
 TGGTTTCGAACTTATCTACATTCAAGCAAACTAGCTCTTTATAAGACATGTAGTTGCT  
 ACCCTTTTGGGCCTTTATCTTGCACTTTTTTGTCTTTGGATGGTATGCCTTACACTTTCTT  
 GTACAAAGTGAATTTCTACTGTATCATGATCATCATAGGAGTGGAGAACATGCACAAT  
 TACTGCTTTGTGTTTGTCTGGGATACCTCACAGTGTGCCAAGTTACTCGAGTCTATATC  
 TTTGACTATGGACAATATTCTGCTGATTTTTTTCAGGCCCAATGATGATCATTACTCAGAAG  
 ATCACTAGTTTGGCTTGGCAAAATTCATGATGGGATGTTTCGGAAGGATGAAGAACTGACT  
 TCCTCACAGAGGGATTTAGCTGTAAGGCGCATGCCAAGCTTACTGGAGTATTTGAGTTAC  
 AACTGTAACTTCATGGGGATCCTGGCAGGCCCACTTTGCTCTTACAAAGACTACATTACT  
 TTCATTGAAGGCAGATCATACCATATCACACAATCTGGTGAAAATGAAAAGAAGAGACA  
 CAGTATGAAAGAACAGAGCCATCTCCAAATACTGCGGTTGTTTCAAGAGCTCTTAGTTTGT  
 GGGGTGCTCTTGTATTTTCACTTGACCATCTGTACAACATTACCTGTGGAGTACAACATT  
 GATGAGCATTTTCAAGCTACAGCTTCGTGGCCAACAAAGATTATCTATCTGTATATCTCT  
 CTTTTGGCTGCCAGACCCAAATACTATTTTGCATGGACGCTAGCTGATGCCATTAATAAT  
 GCTGCAGGCTTTGGTTTCAGAGGGTATGACGAAAATGGAGCAGCTCGCTGGGACTTAATT  
 TCCAATTTGAGAATTCACAAATAGAGATGTCAACAAGTTTCAAGATGTTTCTTGATAAT  
 TGGAAATTCAGACAGCTCTTTGGCTCAAAAGGGTGTGTTATGAACGAACCTCCTTCAGT  
 CCAACTATCCAGACGTTTATTCTCTGCTGCACTTTGGCACGGGGTATACCCAGGATATTAT  
 CTAACGTTTCTAACAGGGGTGTTAATGACATTAGCAGCAAGAGCTATGAGAAATAACTTT  
 AGACATTATTTTATTGAACCTTCCCAACTGAAATTTATTTATGATGTTATAACATGGATA  
 GTAACCAAGTAGCAATAAGTTACACAGTTGTGCCATTTGTGCTTTTCTATAAAACCA  
 TCACTCACGTTTTACAGCTCCTGGTATTATTGCCTGCACATTCTTGGTATCTTAGTATTA  
 TTGTTGTTGCCAGTGAAAAAACTCAAAGAAGAAAGATACACATGAAAACATTCAGCTC  
 TCACAAATCCAAAAGTTTGTGATGAAGGAGAAAATCTTTGGGACAGAACAGTTTTCTACA  
 ACAAACAATGTTTGCAATCAGAATCAAGAAATAGCCTCGAGACATTCATCACTAAAGCAG  
 TGA

Clone variation with respect to NM\_138799.2

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_138799 unedited

GCGAATTCGGCACCAAGGCACAGCGCAGCGGGCGAGCGGCGGGCGGGCGGAGCGCCGA  
 GGCCCCGGCCATGGCCACCACCAGCACCACGGGCTCCACCCTGCTGCAGCCCCTCAGCAAC  
 GCCGTGCAGCTGCCATCGACCAGGTCAACTTTGTAGTGTGCCAACTCTTGCCTTGCTA  
 GCAGCCATTTGGTTTCGAACTTATCTACATTCAAGCAAACTAGCTCTTTATAAGACAT  
 GTAGTTGCTACCCTTTTGGGCCTTTATCTTGCACTTTTTTGTCTTTGGATGGTATGCCTTA  
 CACTTTCTTGACAAAGTGAATTTCTACTGTATCATGATCATCATAGGAGTGGAGAAC  
 ATGCACAATTACTGCTTTGTGTTTGTCTCTGGGATACCTCACAGTGTGCCAAGTTACTCGA  
 GTCTATATCTTTGACTATGGACAATTTCTGCTGATTTTTTTCAGGCCCAATGATGATCATT  
 ACTCAGAAGATCACTAGTTTGGCTTGCAGAAATTCATGATGGGATGTTTCGGAAGGATGAA  
 GAAGTACTTCTCACAGAGGGATTTAGCTGTAAGGCGCATNGCCAGCTTACTGGAGTAT  
 TTGAGTTACAAGTGAATTCATGGGGATCCTGGCAGGCCCACTTTGCTCTTACAAGACT  
 ACATTACTTTGCATTGAGGCAGATCATACCATATCACACAATCTGGGTGAAAATGAAAAG  
 AAGAGACACAGTATGAAAGACAGAGCCATCTCAATACTGCG

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3' Read Nucleotide Sequence:</b> | <p>&gt;OriGene 3' read for NM_138799 unedited</p> <p>NAGGAAC TCGTGTATGGCACTTCCTGTCCAGNANAGCACTGCCGGAGGGTCACAGGGATGCCACCCGGGNATCTCGTTCAGGTAACAGCTATGACCGCGGCCGAATCTANAGTCGAGTTTTTTTTTTTTTTTTTTGTGAGACGGAGTCTTCTCTGTACCCCGGGCTGGAGTGCAATCGCACAAATTTAACTATTGCATCCCCACCTCCCATGTTTTTTAATTCCTGCCTCATCTCCCAAGTTGCTGTATTACAACCGGCTCCACCTCGCCCGTCTAATTTTCGTGCTCCCAATAATACCTCCATTACCACTTTTGCCCGCTGGCCTTAACCCCTGCCCATCGTGATCCGTCCCACTCTGCATCCATTATCCGAAGAATCCCGCGAAAGCCACCACCCCTCACGGAGAATCATCTTACTCTTTGTCACACTATTTGCCCATCACATAACCCTCATTTCCCCCCTTGCGGCGGCTCATCATCATAGAATCCGCCCGCGTCCCTGTTAGCCCTCAAACCAATCAATCCACTATTTAACCCCAATTTCTCCGCGCGCCATAATGTGGCATCTCCCCCCCATTTGTCAGCCGCTCCGCGGCTCTGCCGATTCCCCATCCGCCACCTCCGCTCTTCCACGCCTTTCCCAACCGGCACGCCGTTATTACTATACCTCTCATTATACCGACCCCTCTCTCTATTTACCCCCATGCTCACC GCCGCTCTTTTACATCCATCCTCATCCTCACACCTTCTATCATAATTACACAGCAGTTGCCCTCTCGTTGTCACCCGCTCTNTGTCTCCCCCCTCTTTATTATTTCTGTCTATTTCCAGACACTCCCGATGGTACTCCACTGCACACCGGTGTATGCGTCTCTCCACCAACTTCTATTTTAGACCTCCTTACTATTTCCCCCTCGCCGCCG</p> |
| <b>Restriction Sites:</b>           | NotI-NotI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ACCN:</b>                        | NM_138799                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Insert Size:</b>                 | 4100 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>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>Note:</b>                        | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>RefSeq:</b>                      | <u>NM_138799.2, NP_620154.2</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>RefSeq Size:</b>                 | 3804 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>RefSeq ORF:</b>                  | 1563 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Locus ID:</b>                    | 129642                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**UniProt ID:** Q6ZWT7

**Cytogenetics:** 2p25.1

**Domains:** MBOAT

**Protein Families:** Transmembrane

**Gene Summary:** Acyltransferase which mediates the conversion of lysophosphatidylethanolamine (1-acyl-sn-glycero-3-phosphoethanolamine or LPE) into phosphatidylethanolamine (1,2-diacyl-sn-glycero-3-phosphoethanolamine or PE) (LPEAT activity). Catalyzes also the acylation of lysophosphatidic acid (LPA) into phosphatidic acid (PA) (LPAAT activity). Has also a very weak lysophosphatidylcholine acyltransferase (LPCAT activity). Prefers oleoyl-CoA as the acyl donor. Lysophospholipid acyltransferases (LPLATs) catalyze the reacylation step of the phospholipid remodeling pathway also known as the Lands cycle.[UniProtKB/Swiss-Prot Function]