

Product datasheet for MR225686

Lrat (NM_023624) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lrat (NM_023624) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lrat
Synonyms:	1300010A18Rik; AI449251
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR225686 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGATCGCC

ATGAAGAACCAATGCTGGAAGCTGCGTCCCTCCTGGAGAACTGCTCCTTATTTCCAACCTCAAGC
TCTTTAGCGTGAGCGTCCCGGAGGAGGCACAGGGAAGAACCCTATGAAATCAGCTCTTCGTCCG
GGGCGACGTGTTGGAGGTGTACGGACCCATTTATCCACTATGGGATCTACCTGGGGAAAACCGTGC
GCCATCTAATGCCTGACATCCTGTTGGCCCTGACCAATGACAAGGAACGCACTCAGAAGGTGGTCTCCA
ACAAGCGTCTCCTGGGAGTCATTTGCAAGGTGGCTAGCATCCGTGTGGACACAGTAGAGGACTTTGC
CTACGGAGCAGACATCCTAGTCAATCACCTAGACGGGACTCTCAAGAAGAAGTCCTTACTCAATGAGGAG
GTGGCAGCAGAGCTGAGCAGCAGTTGGGACTGACTCCATACAGCCTACTGTGGAACAACCTGCGAACACT
TTGTGACTTACTGCAGATATGGCTCTCGGATCAGTCCACAGGCTGAGAAGTTCTATGACACCGTGAAGAT
AATCATTCGTGATCAGAGAAGCAGTCTTGCTTCGGCTGTCTTGGGATTAGCATCTATTGTCTACACAGGC
CTGGCATCATATGACCCTTCTGCAATCTGTATCCCATTCTGCTTGTGGATGATGTCTGGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR225686 protein sequence
 Red=Cloning site Green=Tags(s)

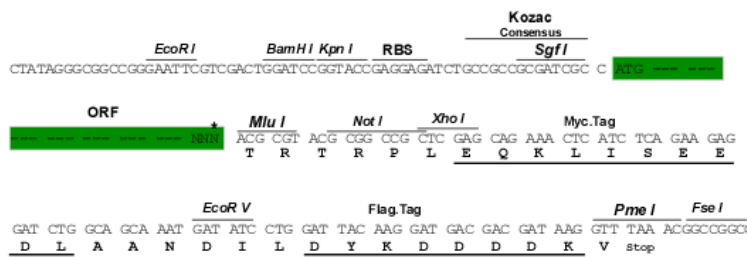
MKNPMLEAASLLLEKLLIISNFKLFSVSVPGGGTGKNRPYEISSFVRGDVLEVSRTHFIIHYGIYLGENRV
 AHLMPDILLAL TNDKERTQKVVSNKRLLLVICKVASIRVDTVEDFAYGADILVNHLDGTLKKKSLNNEE
 VARRAEQQLGLTPYSLWNNCEHFVTYCRYGSRISPQAEKFYDVKIIIRDQRSSLASAVLGLASIVYTG
 LASYMTLPAICIPFCLWMMMSG

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_023624

ORF Size: 696 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_023624.4](#), [NP_076113.1](#)

RefSeq Size: 5349 bp

RefSeq ORF: 696 bp

Locus ID: 79235

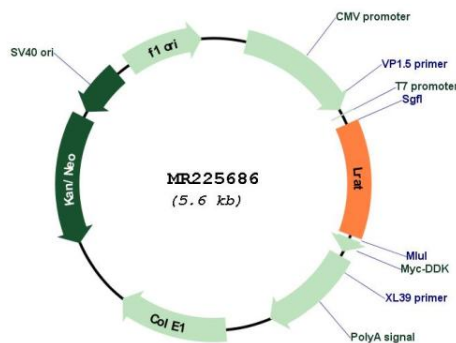
UniProt ID: [Q9JL60](#)

Cytogenetics: 3 E3

MW: 25.8 kDa

Gene Summary: Transfers the acyl group from the sn-1 position of phosphatidylcholine to all-trans retinol, producing all-trans retinyl esters (By similarity). Retinyl esters are storage forms of vitamin A (By similarity). LRAT plays a critical role in vision (By similarity). It provides the all-trans retinyl ester substrates for the isomerohydrolase which processes the esters into 11-cis-retinol in the retinal pigment epithelium; due to a membrane-associated alcohol dehydrogenase, 11 cis-retinol is oxidized and converted into 11-cis-retinaldehyde which is the chromophore for rhodopsin and the cone photopigments (By similarity). Required for the survival of cone photoreceptors and correct rod photoreceptor cell morphology (PubMed:25416279). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225686