

Product datasheet for **MG225686**

Lrat (NM_023624) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Lrat (NM_023624) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Lrat
Synonyms: 1300010A18Rik; AI449251
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG225686 representing NM_023624
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGAACCAATGCTGGAAGCTGCGTCCCTCCTGGAGAACTGCTCCTTATTTCCAACCTCAAGC
TCTTTAGCGTGAGCGTCCCGGGAGGAGGCACAGGGAAGAACCCTATGAAATCAGCTCTTCGTCCG
GGGCGACGTGTTGGAGGTGTACGGACCCATTTATCCACTATGGGATCTACCTGGGGAAAACCGTGC
GCCATCTAATGCCTGACATCCTGTTGGCCCTGACCAATGACAAGGAACGCACTCAGAAGGTGGTCTCCA
ACAAGCGTCTCCTCCTGGGAGTCATTTGCAAGGTGGCTAGCATCCGTGTGGACACAGTAGAGGACTTTGC
CTACGGAGCAGACATCCTAGTCAATCACCTAGACGGGACTCTCAAGAAGAAGTCCTTACTCAATGAGGAG
GTGGCACGCAGAGCTGAGCAGCAGTTGGGACTGACTCCATACAGCCTACTGTGGAACAACCTGCGAACACT
TTGTGACTTACTGCAGATATGGCTCTCGGATCAGTCCACAGGCTGAGAAGTTCTATGACACCGTGAAGAT
AATCATTCGTGATCAGAGAAGCAGTCTTGCTTCGGCTGTCTTGGGATTAGCATCTATTGTCTACACAGGC
CTGGCATCATATGACCCTTCTGCAATCTGTATCCCATTCTGCTTGTGGATGATGTCTGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG225686 representing NM_023624
 Red=Cloning site Green=Tags(s)

MKNPMLEAASLLLEKLLLSNFKLFSVSVPGGGTGKNRPYEISSFVRGDVLEVSRTHFHYGIYLGENRV
 AHLMPDILLALTNDKERTQKVSNKRLLLVICKVASIRVDTVEDFAYGADILVNHLDTLKKKSLNNEE
 VARRAEQQLGLTPYSLWNCEHFVITYCRYGSRISPQAEKFYDVKIIIRDQRSSLASAVLGLASIVYTG
 LASYMTLPAICIPFCLWMMMSG

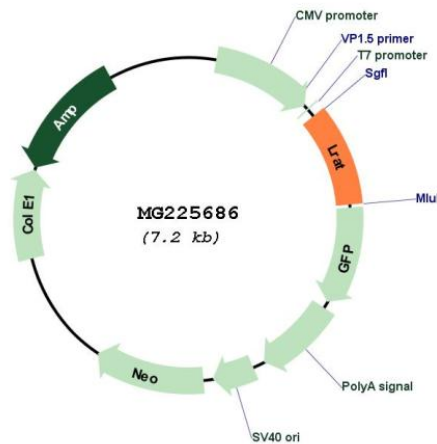
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_023624

ORF Size: 693 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_023624.4 , NP_076113.1
RefSeq Size:	5349 bp
RefSeq ORF:	696 bp
Locus ID:	79235
UniProt ID:	Q9JL60
Cytogenetics:	3 E3
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]