

Product datasheet for **RC206044**

LRAT (NM_004744) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LRAT (NM_004744) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LRAT
Synonyms:	LCA14
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206044 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGAACCCCATGCTGGAGGTGGTGTCTTTACTACTGGAGAAGCTGCTCCTCATCTCCAATTACGC
TCTTTAGTTCGGGCGCCGCGGGCAAGACAAAGGGAGGAACAGTTTTTATGAAACCAGCTCTTCCACCG
AGGCGACGTGCTGGAGGTGCCCGGACCCACCTGACCCACTATGGCATCTACCTAGGAGACAACCGTGT
GCCACATGATGCCGACATCCTGTTGGCCCTGACAGACGACATGGGGCGCACGAGAAGGTGGTCTCCA
ACAAGCGTCTCATCCTGGCGTTATTGTCAAAGTGCCAGCATCCGCGTGGACACAGTGGAGGACTTCGC
CTACGGAGCTAACATCCTGGTCAATCACCTGGACGAGTCCCTCCAGAAAAGGCACTGCTAACGAGGAG
GTGGCGCGGAGGGCTGAAAAGCTGCTGGGCTTTACCCCTACAGCCTGCTGTGGAACAACCTGCGAGCACT
TCGTGACCTACTGCAGATATGGCACCCGATCAGTCCCCAGTCCGACAAGTTTTGTGAGACTGTGAAGAT
AATTATTCGTGATCAGAGAAGTGTCTTGTCTCAGCAGTCTTGGGATTGGCGTCTATAGTCTGTACGGGC
TTGGTATCATACACTACCCTTCTGCAATTTTTATTCCATTCTTCTATGGATGGCTGGC

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC206044 protein sequence
 Red=Cloning site Green=Tags(s)

MKNPMLEVVSLLEKLLIISNFTLFSSGAAGEDKGRNSFYETSSFHRGDVLEVPRTLHLYGIYLGDNRV
 AHMMPDILLAL TDDMGR TQKVSNKRLILGVIVKVASIRVDTVEDFAYGANILVNHLDES LQKALLNEE
 VARRAEKLLGFTPYSLWNCEHFVTYCRYGTPI SPQSDKFCETVKIIIRDQRSVLASAVLGLASIVCTG
 LVS YTTLP AIFIPFFLWMAG

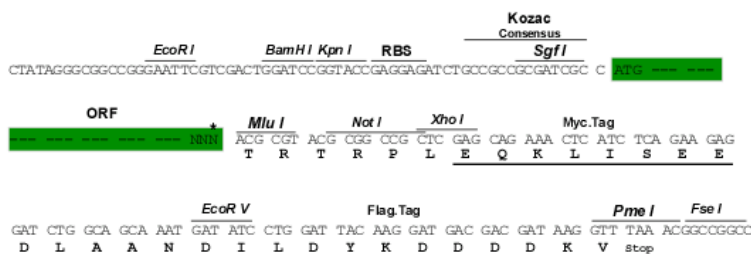
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6320_f08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_004744

ORF Size: 690 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_004744.5](#)

RefSeq Size: 4929 bp

RefSeq ORF: 693 bp

Locus ID: 9227

UniProt ID: [O95237](#)

Cytogenetics: 4q32.1

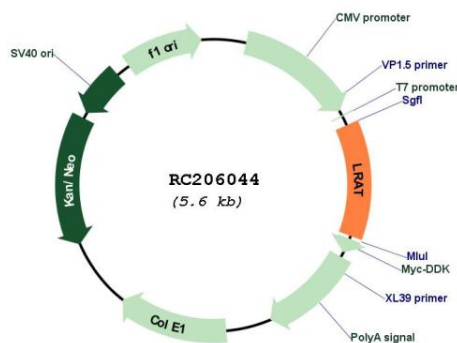
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Retinol metabolism

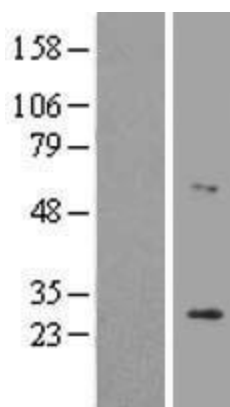
MW: 25.7 kDa

Gene Summary: The protein encoded by this gene localizes to the endoplasmic reticulum, where it catalyzes the esterification of all-trans-retinol into all-trans-retinyl ester. This reaction is an important step in vitamin A metabolism in the visual system. Mutations in this gene have been associated with early-onset severe retinal dystrophy and Leber congenital amaurosis 14. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2014]

Product images:



Circular map for RC206044



Western blot validation of overexpression lysate (Cat# [LY417778]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206044 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).