

Product datasheet for RC221214

alpha Lactalbumin (LALBA) (NM_002289) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: alpha Lactalbumin (LALBA) (NM_002289) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: alpha Lactalbumin
Synonyms: LYZG
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC221214 representing NM_002289
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGAGGTTCTTTGTCCCTCTGTTCTGGTGGGCATCCTGTTCCCTGCCATCCTGGCCAAGCAATTCACAA
 AATGTGAGCTGTCCAGCTGCTGAAAGACATAGATGGTTATGGAGGCATCGCTTTGCCTGAATTGATCTG
 TACCATGTTTACACCAGTGGTTATGACACACAAGCCATAGTTGAAAACAATGAAAGCACGGAATATGGA
 CTCTCCAGATCAGTAATAAGCTTTGGTCAAGAGCAGCCAGTCCCTCAGTCAAGGAACATCTGTGACA
 TCTCCTGTGACAAGTTCTGGATGATGACATTACTGATGACATAATGTGTGCCAAGAAGATCCTGGATAT
 TAAAGGAATTGACTACTGGTTGGCCATAAAGCCCTCTGCACTGAGAAGCTGGAACAGTGGCTTTGTGAG
 AAGTTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC221214 representing NM_002289
 Red=Cloning site Green=Tags(s)

MRFFVPLFLVGIILFPAILAKQFTKCELSQLLKDIDGYGGIALPELICTMFHTSGYDTQAIVENNESTEYG
 LFQISNKLWCKSSQVPQSRNICDISCDKFLDDDDITDDIMCAKKILDIKGIDYWLAKALCTEKLEQLWCE
 KL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

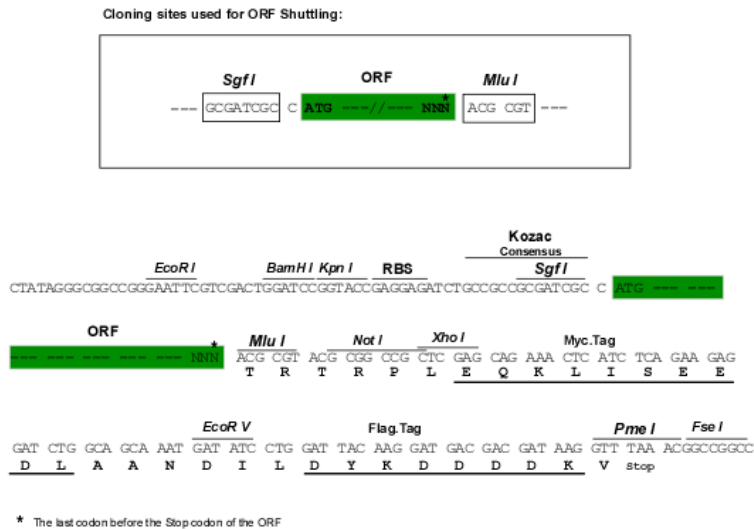
Chromatograms: https://cdn.origene.com/chromatograms/mk6115_d12.zip



[View online »](#)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002289

ORF Size: 426 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_002289.3](#)

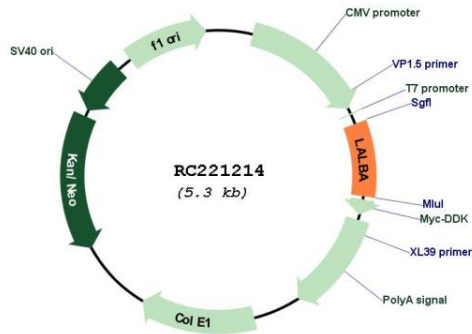
RefSeq Size: 742 bp

RefSeq ORF: 429 bp

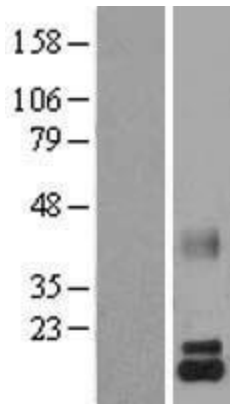
Locus ID: 3906

UniProt ID: [P00709](#)
Cytogenetics: 12q13.11
Protein Families: Secreted Protein
Protein Pathways: Galactose metabolism
MW: 16.22 kDa
Gene Summary: This gene encodes alpha-lactalbumin, a principal protein of milk. Alpha-lactalbumin forms the regulatory subunit of the lactose synthase (LS) heterodimer and beta 1,4-galactosyltransferase (beta4Gal-T1) forms the catalytic component. Together, these proteins enable LS to produce lactose by transferring galactose moieties to glucose. As a monomer, alpha-lactalbumin strongly binds calcium and zinc ions and may possess bactericidal or antitumor activity. A folding variant of alpha-lactalbumin, called HAMLET, likely induces apoptosis in tumor and immature cells. [provided by RefSeq, Jul 2008]

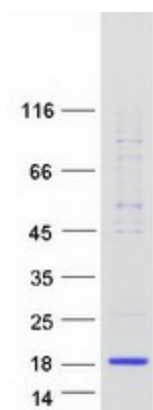
Product images:



Circular map for RC221214



Western blot validation of overexpression lysate (Cat# [LY400829]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221214 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LALBA protein (Cat# [TP321214]). The protein was produced from HEK293T cells transfected with LALBA cDNA clone (Cat# RC221214) using MegaTran 2.0 (Cat# [TT210002]).