

## Product datasheet for **SC303169**

### alpha Lactalbumin (LALBA) (NM\_002289) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	alpha Lactalbumin (LALBA) (NM_002289) Human Untagged Clone
Tag:	Tag Free
Symbol:	alpha Lactalbumin
Synonyms:	LYZG
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_002289 edited GAGCTCGGTACCCATTTTCAGGTTCTTGGGGGTAGCCAAAATGAGGTTCTTTGTCCCTCTG TTCCTGGTGGGCATCCTGTTCCCTGCCATCCTGGCCAAGCAATTCACAAAATGTGAGCTG TCCCAGCTGCTGAAAGACATAGATGTTTATGGAGGCATCGCTTTGCCTGAATTGATCTGT ACCATGTTTCACACCAAGTGGTTATGACACACAAGCCATAGTTGAAAACAATGAAAGCACG GAATATGGACTCTTCCAGATCAGTAATAAGCTTTGGTGAAGAGCAGCCAGGTCCCTCAG TCAAGGAACATCTGTGACATCTCCTGTGACAAGTTCCTGGATGATGACATTACTGATGAC ATAATGTGTGCCAAGAAGATCCTGGATATTAAGGAATTGACTACTGGTTGGCCATAAA GCCCTCTGCACTGAGAAGCTGGAACAGTGGCTTTGTGAGAAGTTGTGAGTGCCTGCTGTC CTTGGCACCCCTGCCACTCCACTCCTGGAATACCTCTCCCTAATGCCACCTCAGTT TGTTTCTTCTGTTCCCCCAAAGCTTATCTGTCTCTGAGCCTTGGGCCCTGTAGTGACAT CACCGAATTCTTGAAGACTATTTCCAGGGATGCCTGAGTGGTGCCTGAGCTCTAGACC CTTACTCAGTGCCTTCGATGGCACTTTCACTACAGCACAGATTTACCTCTGTCTTGAAT AAAGGTCCCACTTTGAAGTCAAAAAAAAAAAAAAAAAA



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_002289 unedited GTTTCATCATTTGTAATACGACTCACTATAGGGCGGCCGCGACATCGAGCTCGGTACCCAT TTCAGGTTCTTGGGGGTAGCCAAAATGAGTTCTTTGTCCCTCTGTTCTGGTGGGCATCC TGTTCCCTGCCATCCTGGCCAAGCAATTCACAAAATGTGAGCTGTCCCAGCTGCTGAAAG ACATAGATGGTTATGGAGGCATCGCTTTGCCTGAATTGATCTGTACCATGTTTCACACCA GTGGTTATGACACACAAGCCATAGTTGAAAACAATGAAAGCACGGAATATGGACTCTTCC AGATCAGTAATAAGCTTTGGTGCAAGAGCAGCCAGGTCCTCAGTCAAGGAACATCTGTG ACATCTCCTGTGACAAGTTCCTGGATGATGACATTACTGATGACATAATGTGTGCCAAGA AGATCCTGGATATTAAGGAATTGACTACTGGTTGGCCATAAAGCCCTCTGCACTGAGA AGCTGGAACAGTGGCTTTGTGAGAAGTTGTGAGTGCTGCTGCTTGGCACCCCTGCC ACTCCACACTCCTGGAATACCTTCCCTAATGCCACCTCCAGTTTGTTCCTTTCTGTTCC CCCCAAGCTTATCTGTCTCTGAACCTTGGGCCCTGTAGTGACTCCCCAAATCAAATC TGGTACCCATATCAAGCTTGTCCACTCTAGATTGCCGGCCGGGTCTAGCCTGTTTCCC TGACCAATCCCGGGGTGGCATCCCCTGTGACCCCTCCCATTCTCCTCCCGGCCCTGG GAATTTCCCCTCCATTGCCCCCAACCCCTGGCCCCAAAAAATATAGTTGCACCACTT TGCTCTACCTGGGGCCCTTCTATAATATATGGAGCGGAAGGGGGTGCCTCTGAACC
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_002289
<b>Insert Size:</b>	800 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>OTI Annotation:</b>	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
<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>RefSeq:</b>	<u><a href="#">NM_002289.2</a></u> , <u><a href="#">NP_002280.1</a></u>
<b>RefSeq Size:</b>	742 bp
<b>RefSeq ORF:</b>	429 bp
<b>Locus ID:</b>	3906
<b>UniProt ID:</b>	<u><a href="#">P00709</a></u>
<b>Cytogenetics:</b>	12q13.11
<b>Protein Families:</b>	Secreted Protein

**Protein Pathways:** Galactose metabolism

**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]