

## Product datasheet for **RC236286**

### Alpha B Crystallin (CRYAB) (NM\_001289807) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Alpha B Crystallin (CRYAB) (NM\_001289807) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CRYAB  
**Synonyms:** CMD1II; CRYA2; CTPP2; CTRCT16; HEL-S-101; HSPB5; MFM2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RC236286 representing NM\_001289807  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

**ATGGACATCGCCATCCACCACCCTGGATCCGCCGCCCTTCTTTCTTTCCACTCCCCAGCCGCCTCT**  
**TTGACCAGTTCTTCGGAGAGCACCTGTTGGAGTCTGATCTTTCCCGACGTCTACTTCCCTGAGTCCCTT**  
**CTACCTTCGGCCACCCTCCTTCTGCGGGCACCCAGCTGGTTTGACACTGGACTCTCAGAGATGCGCCTG**  
**GAGAAGGACAGGTTCTCTGTCAACCTGGATGTGAAGCACTTCTCCCAGAGGAACTCAAAGTTAAGGTGT**  
**TGGGAGATGTGATTGAGGTGCATGGAAAACATGAAGAGCGCCAGGATGAACATGGTTTCATCTCCAGGGA**  
**GTTCCACAGGAAATACCGGATCCCAGCTGATGTAGACCCTCTCACCATTACTTCCCTGTCATCTGAT**  
**GGGGTCTCACTGTGAATGGACCAAGGAAACAGGTCTCTGGCCCTGAGCGCACCATTCCCATACCCCGTG**  
**AAGAGAAGCCTGCTGTACCCGACGCCCAAGAAA**

**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT**  
**ACAAGGATGACGACGATAAGGTTTAA**

**Protein Sequence:** >RC236286 representing NM\_001289807  
**Red=Cloning site Green=Tags(s)**

MDIAIHPWIRPPFFPFHSPSRLFDQFFGEHLLESDFPTSTSLSPFYLRPPSFLRAPSWFDGLSEMRL  
EKDRFSVNLVVKHFSPEELKVKVLGDVIEVHGKHEERQDEHGFISREFHRKYRIPADVPLTITSSLSDD  
GVLTVNGPRKQVSGPERTIPITREEKPAVTAAPKK

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

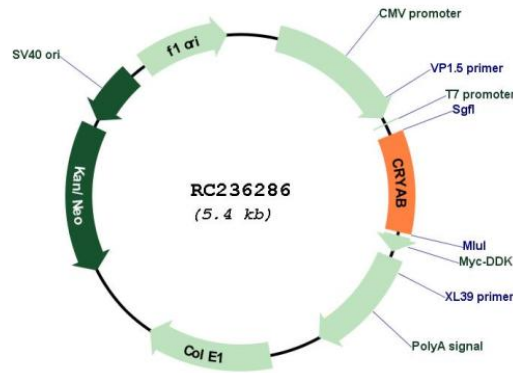
**Restriction Sites:** SgfI-MluI



Cloning Scheme:



Plasmid Map:



ACCN: NM\_001289807

ORF Size: 525 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\\_001289807.1](#), [NP\\_001276736.1](#)

**RefSeq Size:** 964 bp

**RefSeq ORF:** 528 bp

**Locus ID:** 1410

**UniProt ID:** [P02511](#)

**Cytogenetics:** 11q23.1

**MW:** 20.6 kDa

**Gene Summary:** Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced by heat shock and are members of the small heat shock protein (HSP20) family. They act as molecular chaperones although they do not renature proteins and release them in the fashion of a true chaperone; instead they hold them in large soluble aggregates. These heterogeneous aggregates consist of 30-40 subunits; the alpha-A and alpha-B subunits have a 3:1 ratio, respectively. Two additional functions of alpha crystallins are an autokinase activity and participation in the intracellular architecture. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Alpha-A and alpha-B gene products are differentially expressed; alpha-A is preferentially restricted to the lens and alpha-B is expressed widely in many tissues and organs. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2019]