

Product datasheet for **RG202718**

Alpha B Crystallin (CRYAB) (NM_001885) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Alpha B Crystallin (CRYAB) (NM_001885) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: Alpha B Crystallin
Synonyms: CMD1II; CRYA2; CTPP2; CTRCT16; HEL-S-101; HSPB5; MFM2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG202718 representing NM_001885
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGACATCGCCATCCACCACCCTGGATCCGCCGCCCTTCTTTCCCTTCCACTCCCCAGCCGCTCT
 TTGACCAGTTCTTCGGAGAGCACCTGTTGGAGTCTGATCTTTCCCGACGTCTACTTCCCTGAGTCCCTT
 CTACCTTCGGCCACCCTCCTTCTGCGGGCACCCAGCTGGTTTGACTGGACTCTCAGAGATGCGCCTG
 GAAAAGGACAGGTTCTCTGTCAACCTGGATGTGAAGCACTCTCCCCAGAGGAACCAAAGTTAAGGTGT
 TGGGAGATGTGATTGAGGTGCATGGAAAACATGAAGAGCGCCAGGATGAACATGGTTTCATCTCCAGGGA
 GTTCCACAGGAAATACCGGATCCCAGCTGATGTAGACCTCTCACCATTACTTCATCCCTGTCATCTGAT
 GGGTCTCTCACTGTGAATGGACCAAGGAAACAGGTCTCTGGCCCTGAGCGCACCATTCATCACCCGTG
 AAGAGAAGCCTGCTGTCACCGCAGCCCCAAGAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

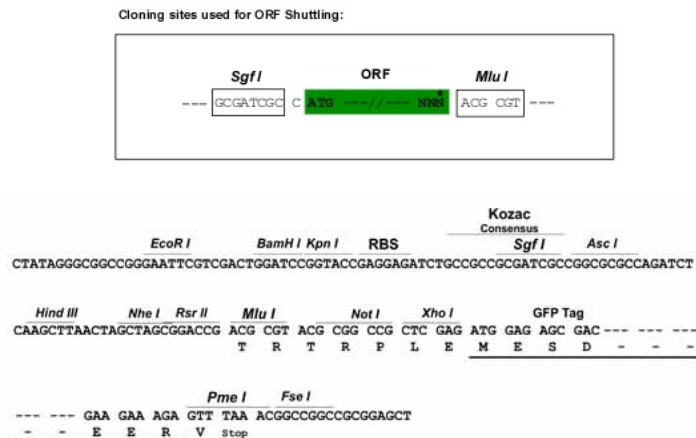
Protein Sequence: >RG202718 representing NM_001885
 Red=Cloning site Green=Tags(s)

MDIAIHPWIRPPFFPFHSPSRLFDQFFGEHLLESDFPTSTLSLSPFYLRPPSFLRAPSWFDGLSEMRL
 EKDRFSVNLVDVKHFSPEELKVKVLGDVIEVHGKHEERQDEHGFIISREFHRKYRIPADVDPLTITSSLSDD
 GVLTVNGPRKQVSGPERTIPITREEKPAVTAAPKK

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



Cloning Scheme:


ACCN: NM_001885

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001885.1](#), [NP_001876.1](#)

RefSeq Size: 691 bp

RefSeq ORF: 528 bp

Locus ID: 1410

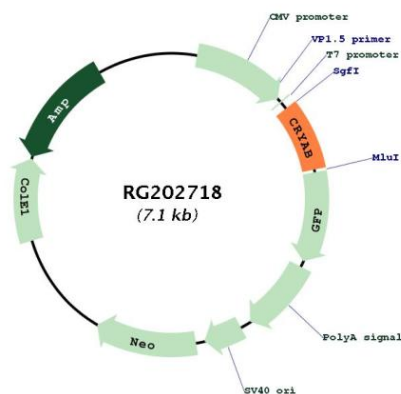
UniProt ID: [P02511](#)

Cytogenetics: 11q23.1

Domains: HSP20, crystallin

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]

Product images:



Circular map for RG202718