

## Product datasheet for RC221965

### beta Crystallin A3 (CRYBA1) (NM\_005208) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	beta Crystallin A3 (CRYBA1) (NM_005208) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	beta Crystallin A3
Synonyms:	CRYB1; CTRCT10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221965 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGGATCGCC

ATGGAGACCCAGGCTGAGCAGCAGGAGCTGAAACCCCTCCAACCACCAAGATGGCTCAGACCAACCCTA  
CGCCGGGGTCCCTGGGGCCATGGAAGATAACCATCTATGATCAGGAGAACTTTCAGGGCAAGAGGATGGA  
GTTACCAGCTCCTGTCCAAATGTCTCTGAGCGCAGTTTTGATAATGTCCGGTCCCTGAAGGTGAAAGT  
GGCGCCTGGATTGTTATGAGCATACCAGCTTCTGTGGGCAACAGTTTATCCTGGAGAGAGGAGAATACC  
CTCGCTGGGATGCCTGGAGTGGGAGTAATGCCTACCACATTGAGCGTCTCATGTCCTTCCGCCCATCTG  
TTCAGCTAATCATAAGGAGTCTAAGATGACCATCTTTGAGAAGGAAAACCTTTATTGGACGCCAGTGGGAG  
ATCTCTGACGACTACCCCTCCTTGCAAGCCATGGGCTGGTTCAACAACGAAGTCGGCTCCATGAAGATAC  
AAAGTGGGGCCTGGGTTTGCTACCAATATCCTGGATATCGTGGGTATCAGTATATCTTGGAAATGTGACCA  
TCATGGAGGAGACTATAAACATTGGAGAGAGTGGGGCTCTCATGCCAGACTTCGCAGATCCAATCGATT  
CGCCGAATCCAACAG

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC221965 protein sequence  
Red=Cloning site Green=Tags(s)

METQAEQQELETLP~~TT~~KMAQTNP~~T~~PGSLGPWKIT~~I~~YDQENFQ~~G~~KRMEFTSSCPNVSE~~R~~SFDN~~V~~RS~~L~~KV~~E~~S  
 GAWIGYEHTSFCGQ~~Q~~FILERGEYPRWD~~A~~WGSNAYHIER~~L~~MSFRP~~I~~C~~S~~AN~~H~~KE~~S~~KMTIF~~E~~KENF~~I~~GRQWE  
 ISDDYPSLQAMGWFNNEVGS~~M~~KIQSGAWVCYQYPGYR~~G~~YQYILECDHHGGDYK~~H~~WREWGSHAQTSQIQSI  
 RRIQQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6462\\_a10.zip](https://cdn.origene.com/chromatograms/mk6462_a10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_005208

**ORF Size:** 645 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\\_005208.5](#)

**RefSeq Size:** 806 bp

**RefSeq ORF:** 648 bp

**Locus ID:** 1411

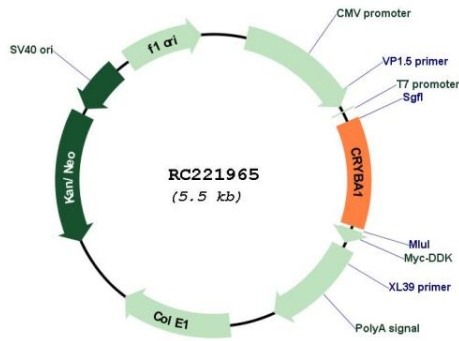
**UniProt ID:** [P05813](#)

**Cytogenetics:** 17q11.2

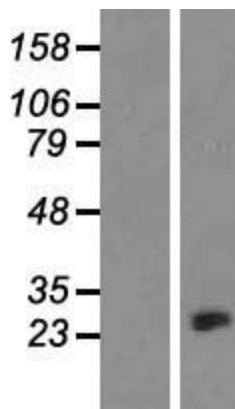
**MW:** 25.1 kDa

**Gene Summary:** Crystallins are separated into two classes: taxon-specific, or enzyme, and ubiquitous. The latter class constitutes the major proteins of vertebrate eye lens and maintains the transparency and refractive index of the lens. Since lens central fiber cells lose their nuclei during development, these crystallins are made and then retained throughout life, making them extremely stable proteins. Mammalian lens crystallins are divided into alpha, beta, and gamma families; beta and gamma crystallins are also considered as a superfamily. Alpha and beta families are further divided into acidic and basic groups. Seven protein regions exist in crystallins: four homologous motifs, a connecting peptide, and N- and C-terminal extensions. Beta-crystallins, the most heterogeneous, differ by the presence of the C-terminal extension (present in the basic group, none in the acidic group). Beta-crystallins form aggregates of different sizes and are able to self-associate to form dimers or to form heterodimers with other beta-crystallins. This gene, a beta acidic group member, encodes two proteins (crystallin, beta A3 and crystallin, beta A1) from a single mRNA, the latter protein is 17 aa shorter than crystallin, beta A3 and is generated by use of an alternate translation initiation site. Deletion of exons 3 and 4 causes the autosomal dominant disease 'zonular cataract with sutural opacities'. [provided by RefSeq, Jul 2008]

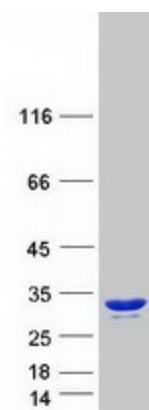
Product images:



Circular map for RC221965



Western blot validation of overexpression lysate (Cat# [LY417445]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221965 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CRYBA1 protein (Cat# [TP321965]). The protein was produced from HEK293T cells transfected with CRYBA1 cDNA clone (Cat# RC221965) using MegaTran 2.0 (Cat# [TT210002]).