

Product datasheet for **SC300064**

alpha A Crystallin (CRYAA) (NM_000394) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha A Crystallin (CRYAA) (NM_000394) Human Untagged Clone
Tag:	Tag Free
Symbol:	alpha A Crystallin
Synonyms:	CRYA1; CTRCT9; HSPB4
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_000394 edited CCCGTGGTACCAAAGCTGAACATGGATGTGACCATCCAGCACCCCTGGTTCAAGCGCACC CTGGGGCCCTTCTACCCAGCCGGCTGTTTCGACAGTTTTTCGGCGAGGGCCTTTTGTAG TATGACCTGCTGCCCTTCTGTCTGCCACCATCAGCCCTACTACCGCCAGTCCCTCTTC CGCACCGTGCTGGACTCCGGCATCTCTGAGGTTTCGATCCGACCGGACAAGTTCGTCATC TTCCTCGATGTGAAGCACTTCTCCCGGAGGACCTCACCGTGAAGGTGCAGGACGACTTT GTGGAGATCCACGAAAGCACAACGAGCGCCAGGACGACACGGCTACATTTCCCGTGAG TTCCACCGCCGCTACCGCTGCCGTCCAACGTGGACCAAGTCCGACCTCTCTTGTCTCCCTG TCTGCCGATGGCATGCTGACCTTCTGTGGCCCCAAGATCCAGACTGGCCTGGATGCCACC CACGCCGAGCGAGCCATCCCGTGTGCGGGGAGGAGAAGCCACCTCGGCTCCCTCGTCC TAAGCAGGCATTGCCTCGGCTGGCTCCCTGCAGCCCTGGCCCATCATGGGGGAGCACC CTGAGGGCGGGGTGTCTGTCTTCTTTGCTTCCCTGTTTTCTTTCCACCTTCTCACATG GAATGAGGGTTTGAAGAGCAGCCAGGAGAGCTTAGGGTCTCAGGGTGTCCAGACCCCG ACACCGGCCAGTGGCGGAAGTGACCGCACCTCACACTCCTTTAGATAGCAGCCTGGCTCC CCTGGGTGCAGGCGCCTCAACTCTGCTGAGGGTCCAGAAGGAGGGGTGACCTCC

Restriction Sites: Please inquire

ACCN: NM_000394

Insert Size: 800 bp

OTI Disclaimer: 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).



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OTI Annotation:	The ORF of this clone has been fully sequenced and found to be a perfect match to NM_000394.2.
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:	<ol style="list-style-type: none"> 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:	<u>NM_000394.2, NP_000385.1</u>
RefSeq Size:	1114 bp
RefSeq ORF:	522 bp
Locus ID:	1409
UniProt ID:	<u>P02489</u>
Cytogenetics:	21q22.3
Gene Summary:	<p>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. Post-translational modifications decrease the ability to chaperone. 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. Defects in this gene cause autosomal dominant congenital cataract (ADCC). [provided by RefSeq, Jan 2014]</p>