



Rabbit Anti-beta Crystallin A3 antibody

SL12859R

Product Name:	beta Crystallin A3
Chinese Name:	βA3/A1-crystallin蛋白抗体
Alias:	Beta crystallin A3 isoform A1 Delta4 form; Beta crystallin A3; Beta crystallin A3 isoform A1 Delta7 form; Beta crystallin A3 isoform A1 Delta8 form; Beta-crystallin A3; CRBA1_HUMAN; CRYB1; CRYBA1; Crystallin beta A1; Crystallin beta A3; Delta8 form; Eye lens structural protein; isoform A1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	25kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human beta Crystallin A3:101-200/215
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Crystallins are the major proteins of the vertebrate eye lens, where they maintain the transparency and refractive index of the lens. Crystallins are divided into a, b, and g families, and the b- and g-crystallins also comprise a superfamily. Crystallins usually contain seven distinctive protein regions, including four homologous motifs, a

connecting peptide, and N- and C-terminal extensions. b-crystallins constitute the major lens structural proteins. They associate into dimers, tetramers, and higher order aggregates. The b-crystallin subfamily is composed of several gene products, including bA1-, bA2-, bA3-, bA4-, bB1-, bB2- and bB3-crystallin. The bA1- and bA3-crystallin proteins are encoded by a single mRNA. They differ by only 17 amino acids, and bA1-crystallin is generated by use of an alternate translation initiation site. The genes for bA4-, bB1-, bB2- and bB3-crystallin are clustered on human chromosome 22q11, while the genes for bA3/A1- and bA2-crystallin map to human chromosomes 17q11 and 2q34, respectively.

Function:

Crystallins are the dominant structural components of the vertebrate eye lens.

Subunit:

Homo/heterodimer, or complexes of higher-order. The structure of beta-crystallin oligomers seems to be stabilized through interactions between the N-terminal arms (By similarity).

Post-translational modifications:

Specific cleavages in the N-terminal arm occur during lens maturation and give rise to several truncated forms. Cleavages do not seem to have adverse effects on solubility. S-methylation and glutathionylation occur in normal young lenses and do not seem to be detrimental.

Isoform A1 initiator methionine is removed. The new N-terminal amino acid is then N-acetylated.

DISEASE:

Defects in CRYBA1 are the cause of cataract congenital zonular with sutural opacities (CCZS) [MIM:600881]. A form of zonular cataract. Zonular or lamellar cataracts are concentric opacities, broad or narrow, usually consisting of powdery white dots affecting one lamella or zonule of an otherwise clear lens.

Similarity:

Belongs to the beta/gamma-crystallin family.

Contains 4 beta/gamma crystallin 'Greek key' domains.

SWISS:

P05813

Gene ID:

1411

Database links:

UniProtKB/Swiss-Prot: P05813.4

Important Note:

	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
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