Recombinant Human CRYAB

Cat. No. CRYAB-27293TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length protein, corresponding to amino acids 1-175 of Human alpha B Crystallin Molecular Weight: 20,159 Da
Species	Human
Source	E.coli
ProteinLength	1-175 a.a.
Description	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. 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 (sHSP also known as the 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

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	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. 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.
Tissue specificity	Lens as well as other tissues.
Form	Liquid
Purity	>95% by SDS-PAGE
Storage buffer	Preservative: NoneConstituents: 50mM Sodium chloride, 20mM Tris HCl, 1mM EDTA, pH 7.5
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Sequences of amino acids	MDIAIHHPWI RRPFFPFHSP SRLFDQFFGE HLLESDLFPT STSLSPFYLR PPSFLRAPSWFDTGLSEMRL EKDRFSVNLD VKHFSPEELK VKVLGDVIEV HGKHEERQDE HGFISREFHRKYRIPADVDP LTITSSLSSD GVLTVNGPRK QVSGPERTIP ITREEKPAVT AAPKK
Sequence Similarities	Belongs to the small heat shock protein (HSP20) family.
Full Length	Full L.

GENE INFORMATION

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Gene Name	CRYAB crystallin, alpha B [Homo sapiens]
Official Symbol	CRYAB
Synonyms	CRYAB; crystallin, alpha B; CRYA2; alpha-crystallin B chain; HSPB5;
Gene ID	1410
mRNA Refseq	NM_001885
Protein Refseq	NP_001876
MIM	123590
Uniprot ID	P02511
Chromosome Location	11q22.3-q23.1
Pathway	Protein processing in endoplasmic reticulum, organism-specific biosystem; Protein processing in endoplasmic reticulum, conserved biosystem;
Function	protein binding; protein homodimerization activity; structural constituent of eye lens; unfolded protein binding;

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