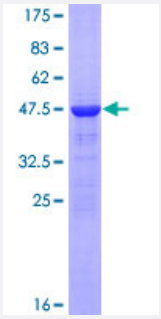
Full-Length

CRYAA (Human) Recombinant Protein (P01)

Catalog # H00001409-P01 Size 25 ug, 10 ug

Applications



Specification

Product Description	Human CRYAA full-length ORF (NP_000385.1, 1 a.a. - 173 a.a.) recombinant protein with GST-tag at N-terminal.
Sequence	MDVTIQHPWFKRTLGPFYPSRLFDQFFGEGLFEYDLLPFLSSTISPYYRQSLFRTVLDSGISEVRSD RDKFVIFLDVKHFSPEDLTVKVQDDFVEIHGKHNERQDDHGYISREFHRRYRLPSNVDQSALSCS LSADGMLTFCGPKIQTGLDATHAERAIPVSREEKPTSAPSS
Host	Wheat Germ (in vitro)
Theoretical MW (kDa)	46.3
Interspecies Antigen Sequence	Mouse (84); Rat (95)
Preparation Method	*in vitro* wheat germ expression system
Purification	Glutathione Sepharose 4 Fast Flow
Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.

Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — CRYAA

Entrez GeneID	1409
GeneBank Accession#	NM_000394.2
Protein Accession#	NP_000385.1
Gene Name	CRYAA
Gene Alias	CRYA1, HSPB4
Gene Description	crystallin, alpha A
Omim ID	123580
Gene Ontology	Hyperlink

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. 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 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. Defects in this gene cause autosomal dominant congenital cataract (ADCC). [provided by RefSeq
Other Designations	crystallin, alpha-1|human alphaA-crystallin (CRYA1)

Disease

- Cataract
- Genetic Predisposition to Disease