SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-HSPB4/Alpha A Crystallin antibody

SL17708R

Product Name:	HSPB4/Alpha A Crystallin
Chinese Name:	热休克蛋白β4抗体
Alias:	Acry 1; Alpha crystallin A chain; Alpha-crystallin A chain; CRYA 1; CRYA1; CRYAA; CRYAA_HUMAN; Crystallin Alpha 1; Crystallin alpha A; Heat shock protein beta 4; Heat shock protein beta-4; HSPB 4; HspB4; short form; Zonular Central Nuclear Cataract.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	ELISA=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:	20kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human HSPB4/Alpha A Crystallin:81-173/173
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:	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

www.sunlongbiotech.com

	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] **Function:** May contribute to the transparency and refractive index of the lens. **Subunit:** Heteropolymer composed of three CRYAA and one CRYAB subunits. Inter-subunit bridging via zinc ions enhances stability,which is crucial as there is no protein turn over in the lens. Can also form homodimers and higher homooligomers. Age-dependent C-terminal truncation affects oligomerization. **Subcellular Location:** Cytoplasm. Nucleus. Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles. **Tissue Specificity:** Expressed in eye lens. **Post-translational modifications:** O-glycosylated; contains N-acetylglucosamine side chains. Deamidation of Asn-101 in lens occurs mostly during the first 30 years of age, followed by a small additional amount of deamidation (approximately 5%) during the next approximately 38 years, resulting in a maximum of approximately 50% deamidation during the lifetime of the individual. Phosphorylation on Ser-122 seems to be developmentally regulated. Absent in the first months of life, it appears during the first 12 years of human lifetime. The relative amount of phosphorylated form versus unphosphorylated form does not change over the lifetime of the individual. **DISEASE:** Defects in CRYAA are a cause of cataract autosomal dominant (ADC) [MIM:604219]. Cataract is an opacification of the crystalline lens of the eye that frequently results in visual impairment or blindness. Opacities vary in morphology, are often confined to a portion of the lens, and may be static or progressive. In general, the more posteriorly located and dense an opacity, the greater the impact on visual function. Cataract is the

www.sunlongbiotech.com

most common treatable cause of visual disability in childhood.

Similarity:
Belongs to the small heat shock protein (HSP20) family.

SWISS:
P02489

Gene ID:
1409

Database links:

Entrez Gene: 281718 Cow

Entrez Gene: 1409 Human

Entrez Gene: 12954 Mouse

Entrez Gene: 100009294 Rabbit

Entrez Gene: 24273 Rat

Omim: 123580 Human

SwissProt: P02470 Cow

SwissProt: P02498 Elephant

SwissProt: P68281 Guinea pig

SwissProt: P02497 Hamster

SwissProt: P02478 Horse

SwissProt: P02489 Human

SwissProt: P24622 Mouse

SwissProt: P02475 Pig

SwissProt: P02493 Rabbit

SwissProt: P24623 Rat

SwissProt: P02488 Rhesus monkey

Unigene: 184085 Human

www.sunlongbiotech.com

	Unigene: 1228 Mouse Unigene: 127769 Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

www.sunlongbiotech.com