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# Anti-Alpha A Crystallin Picoband Antibody

Catalog # ABO12625

## Product Information

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| **Application** | WB, IHC-P |
| **Primary Accession** | P02489 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Alpha-crystallin A chain(CRYAA) detection. Tested with WB, IHC-P in Human;Mouse;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 1409 |
| **Other Names** | Alpha-crystallin A chain, Heat shock protein beta-4, HspB4, Alpha-crystallin A(1-172), Alpha-crystallin A(1-168), Alpha-crystallin A(1-162), CRYAA, CRYA1, HSPB4 |
| **Calculated MW** | 19909 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Mouse, Rat, Human, By Heat<br><br>Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat |
| **Subcellular Localization** | 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. . |
| **Source** | Eukaryota |
| **Protein Name** | Alpha-crystallin A chain |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | E. coli-derived human Alpha A Crystallin recombinant protein (Position: M1-S173). Human Alpha A Crystallin shares 94.8% amino acid (aa) sequence identity with both mouse and rat Alpha A Crystallin. |
| **Purification** | Immunogen affinity purified. |

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| **Cross Reactivity** | No cross reactivity with other proteins |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |

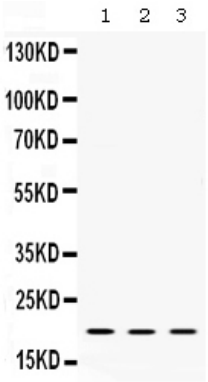
## Protein Information

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| **Name** | CRYAA |
| **Synonyms** | CRYA1, HSPB4 |
| **Function** | Contributes to the transparency and refractive index of the lens (PubMed:18302245). In its oxidized form (absence of intramolecular disulfide bond), acts as a chaperone, preventing aggregation of various proteins under a wide range of stress conditions (PubMed:18199971, PubMed:19595763, PubMed:22120592, PubMed:31792453). Required for the correct formation of lens intermediate filaments as part of a complex composed of BFSP1, BFSP2 and CRYAA (PubMed:28935373). |
| **Cellular Location** | Cytoplasm. Nucleus. Note=Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles |
| **Tissue Location** | Expressed in the eye lens (at protein level). |

## Background

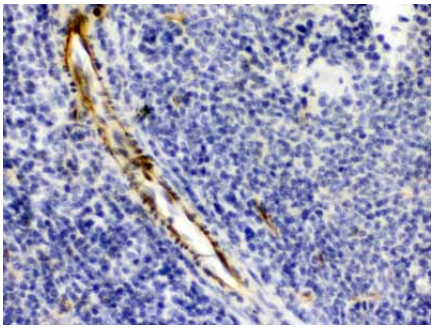
Alpha-crystallin A chain is a protein that in humans is encoded by the CRYAA gene. Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced 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. 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).

## Images

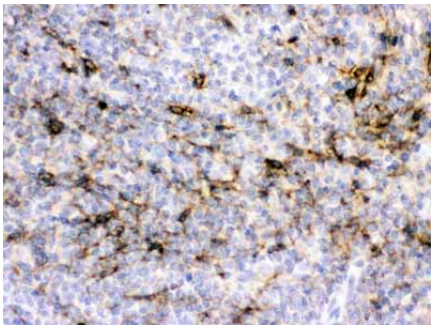



Western blot analysis of Alpha A Crystallin expression in rat spleen extract (lane 1), mouse eye ball extract (lane 2) and SMMC7721 whole cell lysates (lane 3). Alpha A Crystallin at 20KD was detected using rabbit anti- Alpha A Crystallin Antigen Affinity purified polyclonal antibody (Catalog # ABO12625) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .

Alpha A Crystallin was detected in paraffin-embedded



sections of mouse spleen tissues using rabbit anti- Alpha A Crystallin Antigen Affinity purified polyclonal antibody (Catalog # ABO12625) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Alpha A Crystallin was detected in paraffin-embedded sections of rat spleen tissues using rabbit anti- Alpha A Crystallin Antigen Affinity purified polyclonal antibody (Catalog # ABO12625) at 1 ??g/mL. The immunohistochemical section was developed using SABC method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.