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Anti-Alpha A Crystallin Picoband Antibody

Catalog # ABO12625

Product Information

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

Gene ID	102724652;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 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.

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.

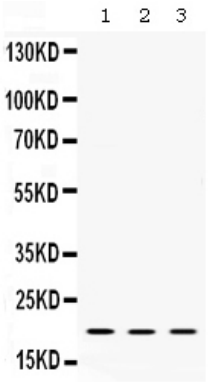
Protein Information

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

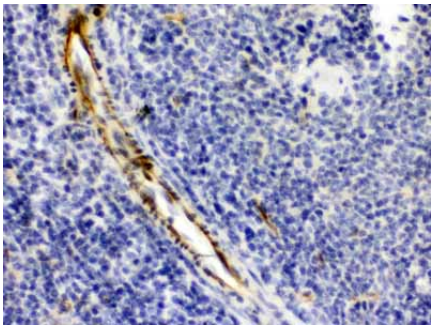
Alpha-crystallin A chain is a protein that in humans is encoded by the CRYAA gene. Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced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

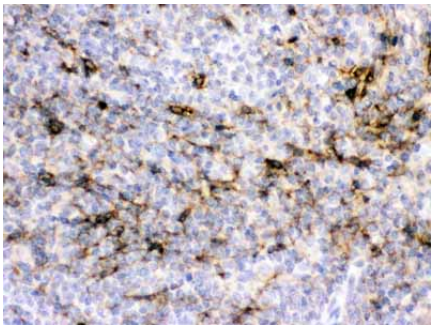


Western blot analysis of Alpha A Crystallin expression in rat spleen extract (lane 1), mouse eye ball extract (lane 2) and SMMC7721 whole cell lysates (lane 3). Alpha A Crystallin at 20KD was detected using rabbit anti- Alpha A Crystallin Antigen Affinity purified polyclonal antibody (Catalog # ABO12625)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