

## Product datasheet for **CF505453**

### alpha A Crystallin (CRYAA) Mouse Monoclonal Antibody [Clone ID: OTI2C3]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI2C3
Applications:	IHC, WB
Recommended Dilution:	WB 1:2000, IHC 1:150
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human CRYAA(NP_000385) produced in HEK293T cell.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	19.7 kDa
Gene Name:	crystallin alpha A
Database Link:	<a href="#">NP_000385</a> <a href="#">Entrez Gene 12954 Mouse</a> <a href="#">Entrez Gene 24273 Rat</a> <a href="#">Entrez Gene 1409 Human</a> <a href="#">P02489</a>



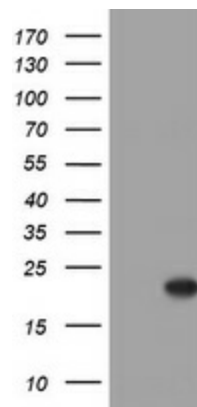
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**Background:**

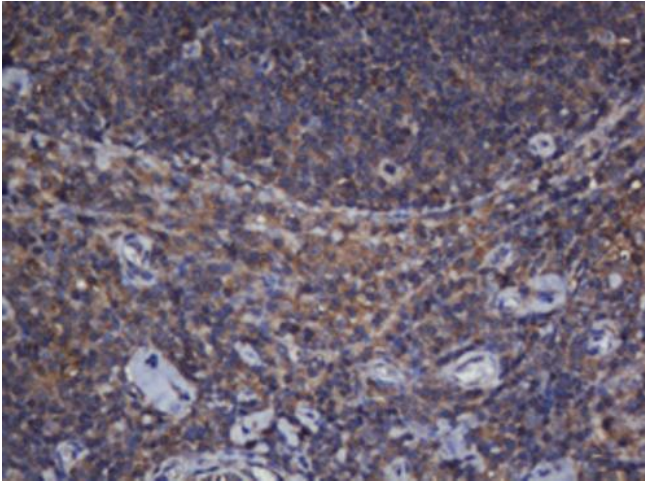
Crystallins are separated into two classes: taxon-specific, or enzyme, and ubiquitous. The latter class constitutes the major proteins of vertebrate eye lens and maintains the transparency and refractive index of the lens. Since lens central fiber cells lose their nuclei during development, these crystallins 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, Jul 2008]

**Synonyms:**

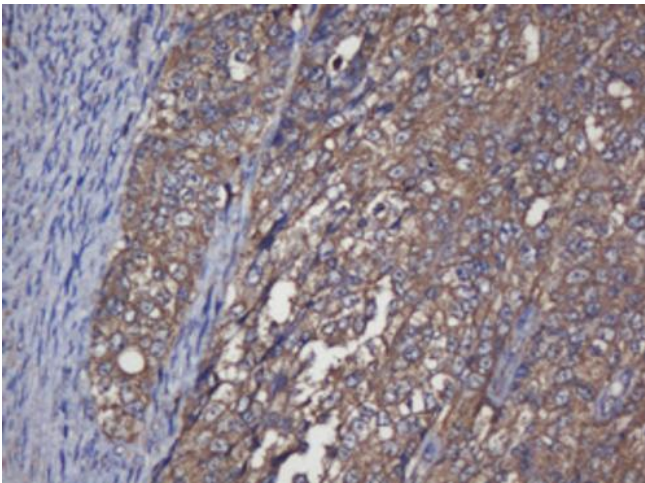
CRYA1; CTRCT9; HSPB4

**Product images:**

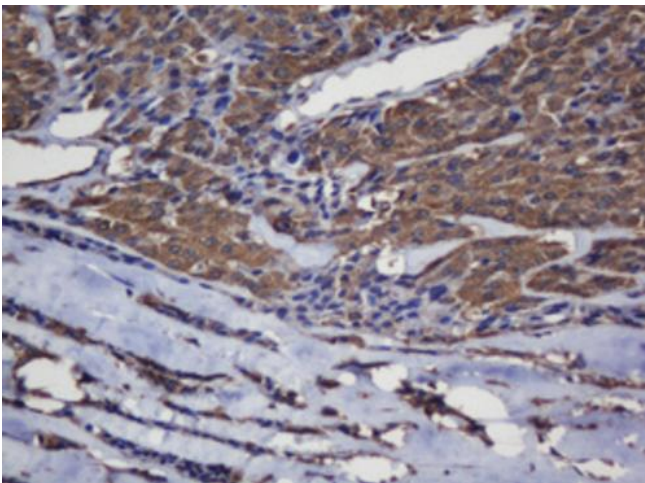
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CRYAA (Cat# [RC216946], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CRYAA (Cat# [TA505453]). Positive lysates [LY424743] (100ug) and [LC424743] (20ug) can be purchased separately from OriGene.



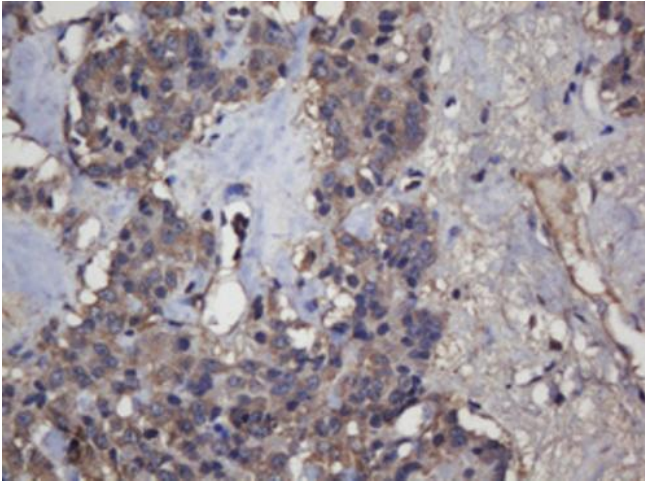
Immunohistochemical staining of paraffin-embedded Human lymph node tissue within the normal limits using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



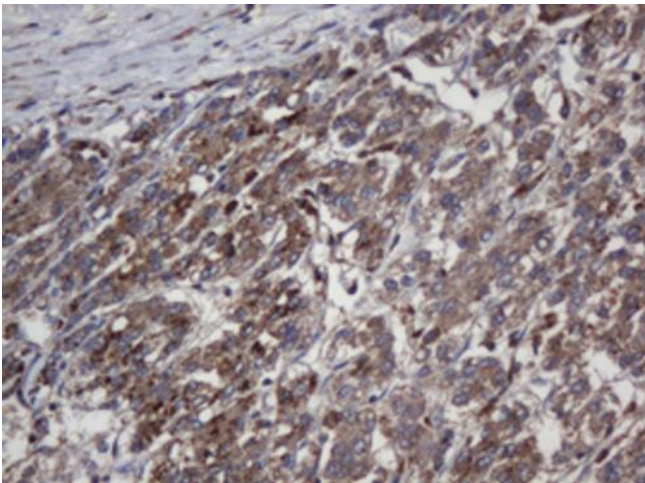
Immunohistochemical staining of paraffin-embedded Adenocarcinoma of Human endometrium tissue using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



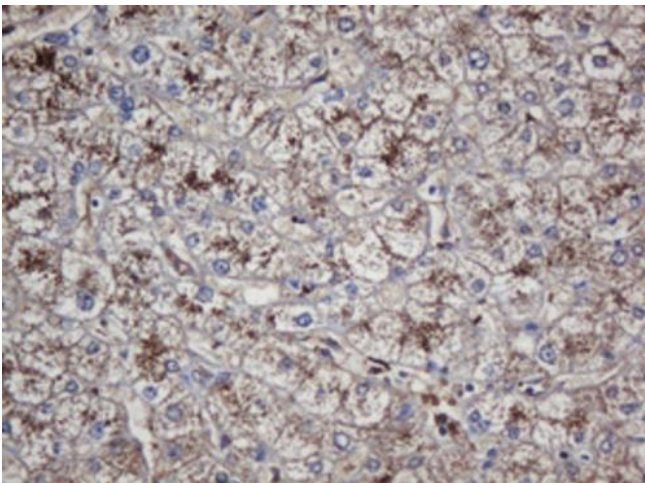
Immunohistochemical staining of paraffin-embedded Carcinoma of Human thyroid tissue using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



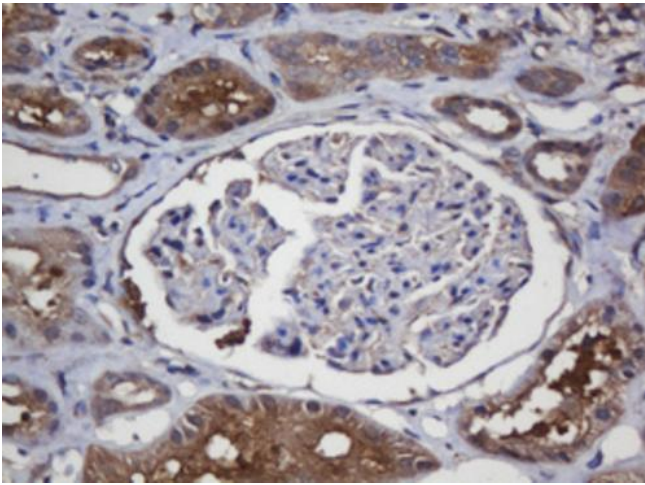
Immunohistochemical staining of paraffin-embedded Carcinoma of Human pancreas tissue using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



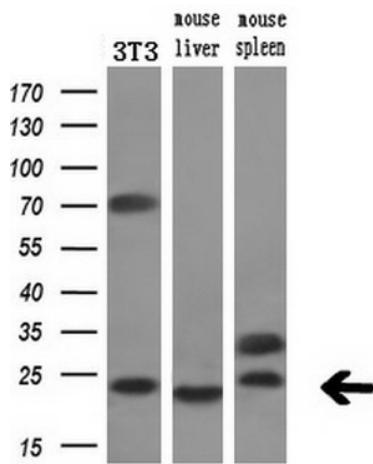
Immunohistochemical staining of paraffin-embedded Carcinoma of Human liver tissue using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



Immunohistochemical staining of paraffin-embedded Human liver tissue within the normal limits using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



Immunohistochemical staining of paraffin-embedded Human Kidney tissue within the normal limits using anti-CRYAA mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min, [TA505453])



Western blot analysis of extracts (10ug) from a mouse cell line and 2 different mouse tissues by using anti-CRYAA monoclonal antibody (1:200).