abcam

ab13496

Anti-Alpha B Crystallin antibody [1B6.1-3G4]

Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496) is a mouse monoclonal antibody detecting Alpha B Crystallin in **Western Blot, Flow Cytometry, IHC-P**. Suitable for **Cow, Human**.

- Over 50 publications
- Trusted since 2004

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Cow CRYAB. Database link P02510
Clone number	1B6.1-3G4
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Purified native protein - Cow, Recombinant full length protein

Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Cow, Mouse, Chicken, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Cow, Mouse, Chicken, Rat
Dilution info	-
Notes	-

Not recommended

Species	Purified native protein - Cow, Recombinant full length protein
Dilution info	-
Notes	-

ICC

Expected

Species	Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human, Mouse, Chicken, Rat
Dilution info	-
Notes	-

Not recommended

Species	Purified native protein - Cow, Recombinant full length protein
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Predicted

Species	Cow, Mouse, Chicken, Rat
Dilution info	-
Notes	-

Not recommended

Species	Purified native protein - Cow, Recombinant full length protein

Dilution info	-
Notes	-

IHC-Fr

Expected

Species	Mouse, Rat, Human, Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Chicken
Dilution info	-
Notes	-

Not recommended

Species	Purified native protein - Cow, Recombinant full length protein
Dilution info	-
Notes	-

IHC-FrFl

Expected

Species	Mouse, Rat, Chicken, Human, Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Purified native protein - Cow, Recombinant full length protein
Dilution info	-
Notes	-

Target data

See full target information CRYAB

Function	May contribute to the transparency and refractive index of the lens. Has chaperone-like activity, preventing aggregation of various proteins under a wide range of stress conditions. In lens epithelial cells, stabilizes the ATP6V1A protein, preventing its degradation by the proteasome (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P) in Cow, Human samples.

What is the molecular weight of Alpha B Crystallin?
Anti-Alpha B Crystallin [1B6.1-3G4] (ab13496) specifically detects a band for Alpha B Crystallin (UniProt: P02510) at a molecular weight of 21kDa.

Trusted by the scientific community
Anti-Alpha B Crystallin [1B6.1-3G4] (ab13496) was first used in a scientific publication in 2004 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists
Anti-Alpha B Crystallin [1B6.1-3G4] (ab13496) has over 5 independent reviews from customers.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Alpha B Crystallin also known as CRYAB or alpha B crystallin protein is a small heat shock protein with a molecular mass of approximately 20 kDa. It is expressed in various tissues including the eye lens heart skeletal muscles and the brain. Alpha B Crystallin functions mechanically as a chaperone helping to prevent the aggregation of unfolded proteins by stabilizing them. This protein plays an important role in maintaining proper cellular function especially under stress conditions.
Biological function summary	Alpha B crystallin performs as part of the larger small heat shock protein family which contributes to the cellular defense system. It acts primarily as a chaperone binding to denatured proteins to protect the cells from damage during environmental stresses such as heat and oxidative stress. Alpha B crystallin often forms oligomeric complexes which increases its protective properties. This protein exhibits significant anti-apoptotic functions by interacting with various apoptosis-regulating factors contributing to cellular survival.
Pathways	Alpha B crystallin integrates into the cellular stress response and apoptosis pathways. It involves the PI3K/Akt signaling pathway known for regulating cell survival and preventing programmed cell death. Alpha B crystallin also interacts with other proteins such as Bcl-2 further enhancing its role in anti-apoptotic activities. Its contribution to these pathways highlights its protective function during cellular stress situations.
Associated diseases and disorders	Alpha B crystallin is associated with cataracts and dilated cardiomyopathy. It plays a significant role in maintaining lens transparency and mutations or dysfunctions in alpha B crystallin can lead to cataract development. Similarly in cardiac tissue abnormal alpha B crystallin expression links to dilated cardiomyopathy. The protein is also known to associate with other structural proteins like desmin where disruptions may contribute to muscle-related diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

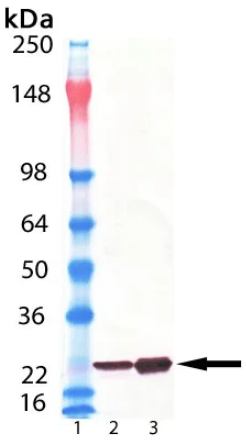
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



Western blot - Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496)

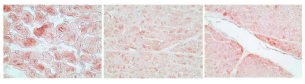
All lanes:
Western blot - Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496) at 1/1000 dilution

Lane 1:
α-Crystallin (bovine), (native) at 1/1000 dilution

Lane 2:
αB-Crystallin (bovine), (native)

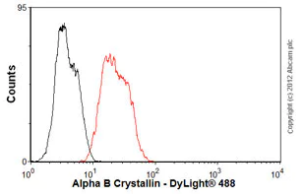
Predicted band size: 20 kDa

Observed band size: 20 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496)

Immunohistochemistry (paraffin sections) analysis of Human heart tissue labelling Alpha B Crystallin with ab13496 at 20 ug/mL.



Flow Cytometry - Anti-Alpha B Crystallin antibody [1B6.1-3G4] (ab13496)

Alpha B Crystallin Flow Cytometry staining using mouse Anti-Alpha B Crystallin antibody

Overlay histogram showing SH-SY5Y cells stained with ab13496 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab13496, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.
This image was generated using the ascites version of the product.

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