

CRYAB Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	22	Rabbit	#P02511	1410

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CRYAB Antibody detects endogeneous levels of total CRYAB protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu165 of human CRYAB protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

CRYAB (αB-Crystallin) is a member of the small heat shock protein (sHSP also known as HSP20) family (1). This protein was initially found to be overexpressed in the eye lens, and later also detected at high levels in heart and skeletal muscle tissues (2,3). CRYAB functions mainly as a molecular chaperone, responding to stress by binding unfolded target proteins to prevent aggregation (4,5). Research studies have shown that elevated expression of CRYAB in neurological disease and stroke patients protects tissue and cells from damage under extreme stress, leading to the investigation of CRYAB as a potential therapeutic target (6-9). Researchers also found that expression of the missense mutation of CRYAB (R120G) in the mouse model causes cardiomyopathy due to abnormal desmin aggregation (10). At the molecular level, CRYAB is involved in multiple biological processes, such as inhibiting apoptosis by binding and inhibiting caspase and proapoptotic Bax and Bcl-xS protein functions (11,12), promoting angiogenesis by binding and stabilizing VEGF for secretion (13), and regulating cytoskeletal organization through association with actin filament, intermediate filament, and cardiac titin (14-16).

Background References

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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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