Revision 1

Store at -20C

#45844

CRYAB (D6S9E) Rabbit mAb

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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, IP	H M R	Endogenous	22	Rabbit IgG	#P02511	1410

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CRYAB (D6S9E) Rabbit mAb recognizes endogenous levels of total CRYAB protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu165 of human CRYAB protein.

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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13. Kase, S. et al. (2010) *Blood* 115, 3398-406.
14. Wang, K. and Spector, A. (1996) *Eur J Biochem* 242, 56-66.
15. Nicholl, I.D. and Quinlan, R.A. (1994) *EMBO J* 13, 945-53.
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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 **IP:** Immunoprecipitation

Cross-Reactivity Key

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

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