

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human AlphaB Crystallin/CRYAB in direct ELISAs and human, mouse, and rat AlphaB Crystallin/CRYAB in Western blots. In direct ELISAs, no cross-reactivity with recombinant human AlphaA Crystallin/CRYAA is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 731502
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Crystallin/CRYAB Met1-Lys175 Accession # P02511
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Simple Western	1 µg/mL	See Below

DATA

Western Blot

Detection of Human, Mouse, and Rat AlphaB Crystallin/CRYAB by Western Blot. Western blot shows lysates of rat heart tissue, mouse heart tissue, and human heart tissue. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human/Mouse/Rat AlphaB Crystallin/CRYAB Monoclonal Antibody (Catalog # MAB4849) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For additional reference, recombinant human AlphaB Crystallin/CRYAB and recombinant human AlphaA Crystallin/CRYAA (5 ng/lane) were included. A specific band was detected for AlphaB Crystallin/CRYAB at approximately 23 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western

Detection of Human AlphaB Crystallin/CRYAB by Simple Western™. Simple Western lane view shows lysates of human heart tissue, loaded at 0.2 mg/mL. A specific band was detected for AlphaB Crystallin/CRYAB at approximately 28 kDa (as indicated) using 1 µg/mL of Mouse Anti-Human/Mouse/Rat AlphaB Crystallin/CRYAB Monoclonal Antibody (Catalog # MAB4849). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CRY-alpha B (crystalline α-B chain/CRYAB; also HspB5) is a 22-23 kDa member of the HSP20 family of proteins. It has widespread expression, and is found in lens epithelium where it noncovalently oligomerizes with CRYAA to generate a transparent 350-1000 kDa α-crystalline protein complex. Human CRYAB is 175 amino acids (aa) in length. It contains an α-crystalline Hsp domain over aa 66-149. Multiple post-translational modifications may exist. The N-terminal Met and MetAspIleAlaIleHis sequence is occasionally cleaved. It may also be phosphorylated at Ser45 and 59, be potentially O-GlcNAc modified at Thr158, 162 or 170, and acetylated at Lys92. An alternate start site at Met68 may be accompanied by a 47 aa substitution for aa 109-175. Full-length human CRYAB shares 54% aa sequence identity with CRYAA, and 98% aa identity with mouse CRYAB.