

DESCRIPTION

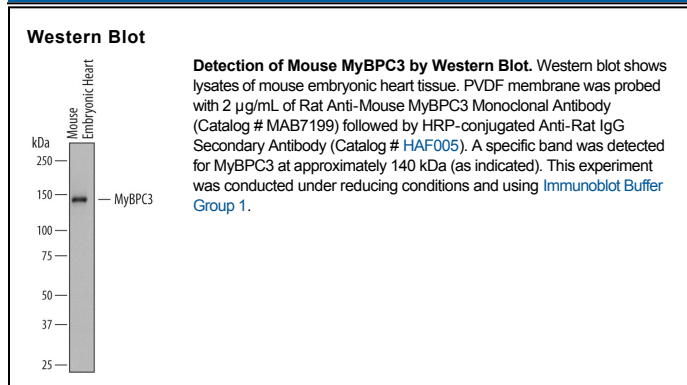
Species Reactivity	Mouse
Specificity	Detects mouse MyBPC3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human MyBPC3 is observed.
Source	Monoclonal Rat IgG ₁ Clone # 751631
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse MyBPC3 Pro2-Ser169 Accession # O70468
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	2 µg/mL	See Below

DATA



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

MyBPC3 (Myosin-binding protein C-cardiac type) is a 140-150 kDa member of the MyBP family, Ig superfamily of proteins. It is expressed in cardiac muscle, and contributes both to myosin filament structure by interacting with light meromyosin, and the regulation of contraction by binding to myosin subfragment-2, which results in a reduction of actomyosin ATPase activity. Mouse MyBPC3 is 1270 amino acids (aa) in length. It contains five consecutive C2-type Ig-like domains (aa 151-767), three FN type III repeats (aa 768-958), and two additional C-terminal Ig-like domains (aa 967-1270). There are at least three utilized phosphorylation sites and one Pro-rich region (aa 100-150). In human, multiple mutations generate variable-length premature truncated forms of MyBPC3. There are two potential isoform variants. One basically shows a six aa substitution for aa 339-344, while a second contains the same six aa substitution coupled to an eight aa extension at the N-terminus. MyBPC3 is a thick filament-associated protein located in the crossbridge region of cardiac muscle sarcomeres. It is known to be a physiological substrate of cAMP-dependent protein kinase. MyBPC3 has a role in sarcomeric structure and in the regulation of cardiac muscle contraction. MyBPC3 is released into the coronary effluent during myocardial infarction. Mutations in MYBPC3 are associated with hypertrophic cardiomyopathy. Within aa 2-169, mouse MyBPC3 shares 71% and 85% aa sequence identity with human and rat MyBPC3, respectively.