10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# MYBPC3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12436a

## Product Information

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|---|---|
| **Application** | WB, IHC-P, E |
| **Primary Accession** | Q14896 |
| **Other Accession** | P56741, O70468, NP_000247.2 |
| **Reactivity** | Human, Rat, Mouse |
| **Predicted** | Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB31023 |
| **Calculated MW** | 140762 |
| **Antigen Region** | 189-218 |

## Additional Information

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| **Gene ID** | 4607 |
| **Other Names** | Myosin-binding protein C, cardiac-type, Cardiac MyBP-C, C-protein, cardiac muscle isoform, MYBPC3 |
| **Target/Specificity** | This MYBPC3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 189-218 amino acids from the N-terminal region of human MYBPC3. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | MYBPC3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | MYBPC3 |
| **Function** | Thick filament-associated protein located in the crossbridge region of vertebrate striated muscle a bands. In vitro it binds MHC, F- actin and native |

thin filaments, and modifies the activity of actin- activated myosin ATPase. It may modulate muscle contraction or may play a more structural role.

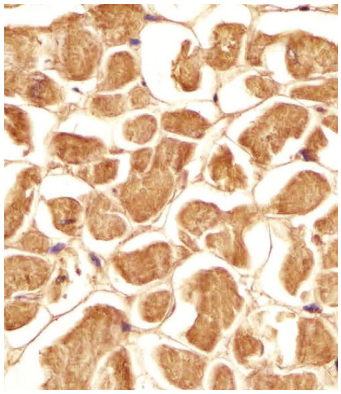
## Background

MYBPC3 encodes the cardiac isoform of myosin-binding protein C. Myosin-binding protein C is a myosin-associated protein found in the cross-bridge-bearing zone (C region) of A bands in striated muscle. MYBPC3, the cardiac isoform, is expressed exclussively in heart muscle. Regulatory phosphorylation of the cardiac isoform in vivo by cAMP-dependent protein kinase (PKA) upon adrenergic stimulation may be linked to modulation of cardiac contraction. Mutations in MYBPC3 are one cause of familial hypertrophic cardiomyopathy.

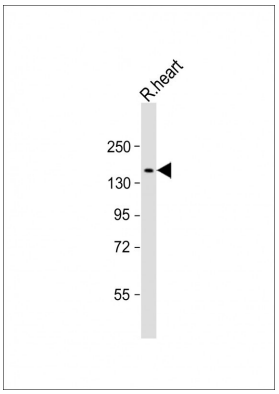
## References


Millat, G., et al. Clin. Chim. Acta 411 (23-24), 1983-1991 (2010) :
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Millat, G., et al. Eur J Med Genet 53(5):261-267(2010)
Zimmerman, R.S., et al. Genet. Med. 12(5):268-278(2010)
Brion, M., et al. Ann. Clin. Lab. Sci. 40(3):285-289(2010)


## Images



AP12436A staining MYBPC3 in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.




Anti-MYBPC3 Antibody (N-term) at 1:2000 dilution + rat heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size :141kDa Blocking/Dilution buffer: 5% NFDM/TBST.

## Citations

- Functional characterization of human myosin-binding protein C3 variants associated with hypertrophic cardiomyopathy reveals exon-specific cardiac phenotypes in zebrafish model