

MYBPC3 (h2): 293T Lysate: sc-112857

BACKGROUND

MYBPC3 (myosin-binding protein C, cardiac) encodes the cardiac isoform of the thick-filament myosin-binding protein C. It is found in the crossbridge-bearing zone (C region) of A bands in vertebrate striated muscle. Regulatory phosphorylation of MYBPC3 by cAMP-dependent protein kinase (PKA) upon adrenergic stimulation may be linked to modulation of cardiac contraction. MYBPC3 binds F-Actin, MHC and native thin filaments, and modifies the activity of Actin-activated myosin ATPase. Mutations in the MYBPC3 gene lead mainly to truncation of the protein, which results in one cause of familial hypertrophic cardiomyopathy type 4 (CMH4), a heart disorder characterized by ventricular hypertrophy, which often involves the interventricular septum and is usually asymmetric. The MYBPC3 gene maps to chromosome 11p11.2.

REFERENCES

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- Yu, B., et al. 1998. Molecular pathology of familial hypertrophic cardiomyopathy caused in the cardiac Myosin binding protein C gene. *J. Med. Genet.* 35: 205-210.
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- Moolman-Smook, J.C., et al. 1999. The origins of hypertrophic cardiomyopathy-causing mutations in two South African subpopulations: a unique profile of both independent and founder events. *Am. J. Hum. Genet.* 65: 1308-1320.
- Richard, P., et al. 2003. Hypertrophic cardiomyopathy: distribution of disease genes, spectrum of mutations and implications for a molecular diagnosis strategy. *Circulation* 107: 2227-2232.

CHROMOSOMAL LOCATION

Genetic locus: MYBPC3 (human) mapping to 11p11.2.

PRODUCT

MYBPC3 (h2): 293T Lysate represents a lysate of human MYBPC3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

MYBPC3 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive MYBPC3 antibodies. Recommended use: 10-20 µl per lane.

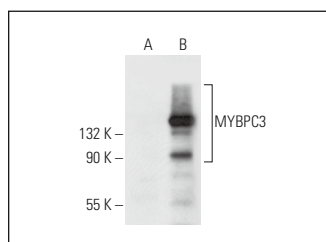
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MYBPC3 (G-7): sc-137237 is recommended as a positive control antibody for Western Blot analysis of enhanced human MYBPC3 expression in MYBPC3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

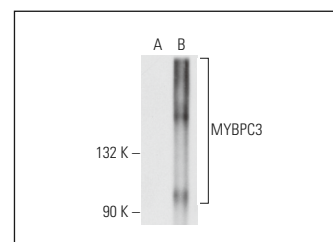
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



MYBPC3 (G-7): sc-137237. Western blot analysis of MYBPC3 expression in non-transfected: sc-117752 (A) and human MYBPC3 transfected: sc-112857 (B) 293T whole cell lysates.



MYBPC3 (G-2): sc-166081. Western blot analysis of MYBPC3 expression in non-transfected: sc-117752 (A) and human MYBPC3 transfected: sc-112857 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.