# SANTA CRUZ BIOTECHNOLOGY, INC.

# MYBPC2 (K-20): sc-243560



BACKGROUND

MYBPC2, also known as MYBPCF or MYBPC, is a 1,142 amino acid protein that contains 3 fibronectin type-III domains and 7 Ig-like C<sub>2</sub>-type domains. Existing as a member of the immunoglobulin superfamily, MYBPC2 functions as a thick filament-associated protein that localizes to striated muscle bands in vertebrae and is thought to modify the activity of select ATPases. Additionally, MYBPC2 may play a role in the modulation of muscle contraction and in the overall structural integrity of the cell. The gene encoding MYBPC2 maps to human chromosome 19, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

## REFERENCES

- Weber, F.E., Vaughan, K.T., Reinach, F.C. and Fischman, D.A. 1993. Complete sequence of human fast-type and slow-type muscle myosinbinding-protein C (MyBP-C). Differential expression, conserved domain structure and chromosome assignment. Eur. J. Biochem. 216: 661-669.
- Alyonycheva, T.N., Mikawa, T., Reinach, F.C. and Fischman, D.A. 1997. Isoform-specific interaction of the myosin-binding proteins (MyBPs) with skeletal and cardiac myosin is a property of the C-terminal immunoglobulin domain. J. Biol. Chem. 272: 20866-20872.
- Moolman-Smook, J., Flashman, E., de Lange, W., Li, Z., Corfield, V., Redwood, C. and Watkins, H. 2002. Identification of novel interactions between domains of Myosin binding protein-C that are modulated by hypertrophic cardiomyopathy missense mutations. Circ. Res. 91: 704-711.
- Welikson, R.E. and Fischman, D.A. 2002. The C-terminal Igl domains of myosin-binding proteins C and H (MyBP-C and MyBP-H) are both necessary and sufficient for the intracellular crosslinking of sarcomeric myosin in transfected non-muscle cells. J. Cell. Sci. 115 (Pt. 17): 3517-3526.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 160793. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Flashman, E., Korkie, L., Watkins, H., Redwood, C. and Moolman-Smook, J.C. 2008. Support for a trimeric collar of myosin binding protein C in cardiac and fast skeletal muscle, but not in slow skeletal muscle. FEBS Lett. 582: 434-438.
- Guardiani, C., Cecconi, F. and Livi, R. 2008. Computational analysis of folding and mutation properties of C5 domain of myosin binding protein C. Proteins 70: 1313-1322.

### CHROMOSOMAL LOCATION

Genetic locus: MYBPC2 (human) mapping to 19q13.33; Mybpc2 (mouse) mapping to 7 B4.

### SOURCE

MYBPC2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYBPC2 of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243560 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

MYBPC2 (K-20) is recommended for detection of MYBPC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with MYBPC1 or MYBPC3.

MYBPC2 (K-20) is also recommended for detection of MYBPC2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for MYBPC2 siRNA (h): sc-97114, MYBPC2 siRNA (m): sc-149731, MYBPC2 shRNA Plasmid (h): sc-97114-SH, MYBPC2 shRNA Plasmid (m): sc-149731-SH, MYBPC2 shRNA (h) Lentiviral Particles: sc-97114-V and MYBPC2 shRNA (m) Lentiviral Particles: sc-149731-V.

Molecular Weight of MYBPC2: 128 kDa.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **RESEARCH USE**

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

## PROTOCOLS

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