SANTA CRUZ BIOTECHNOLOGY, INC.

MYBPC1 (E-6): sc-515407

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MYBPC1, also known as MYBPCS (myosin-binding protein C, slow-type) or MyBP-C, is a 1,141 amino acid protein that contains three fibronectin type-III domains and seven Ig-like C2-type domains. Existing as a member of the immunoglobulin superfamily, MYBPC1 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, MYBPC1 may play a role in the modulation of muscle contraction and in the overall structural integrity of the cell. The gene encoding MYBPC1 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and Trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Weber, F.E., et al. 1993. Complete sequence of human fast-type and slow-type muscle myosin-binding-protein C (MyBP-C). Differential expression, conserved domain structure and chromosome assignment. Eur. J. Biochem. 216: 661-669.
2. Alyonycheva, T.N., et al. 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.
3. Welikson, R.E. and Fischman, D.A. 2002. The C-terminal IgI 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: 3517-3526.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 160794. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MYBPC1 (human) mapping to 12q23.2.

SOURCE

MYBPC1 (E-6) is a mouse monoclonal antibody raised against amino acids 554-613 mapping within an internal region of MYBPC1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MYBPC1 (E-6) is available conjugated to agarose (sc-515407 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515407 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515407 PE), fluorescein (sc-515407 FITC), Alexa Fluor® 488 (sc-515407 AF488), Alexa Fluor® 546 (sc-515407 AF546), Alexa Fluor® 594 (sc-515407 AF594) or Alexa Fluor® 647 (sc-515407 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515407 AF680) or Alexa Fluor® 790 (sc-515407 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MYBPC1 (E-6) is recommended for detection of MYBPC1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for MYBPC1 siRNA (h): sc-96079, MYBPC1 shRNA Plasmid (h): sc-96079-SH and MYBPC1 shRNA (h) Lentiviral Particles: sc-96079-V.

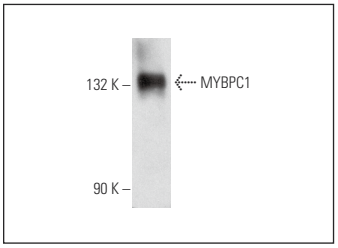
Molecular Weight of MYBPC1: 128 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MYBPC1 (E-6): sc-515407. Western blot analysis of MYBPC1 expression in human skeletal muscle tissue extract.

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 for detailed protocols and support products.