

DESCRIPTION

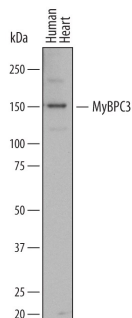
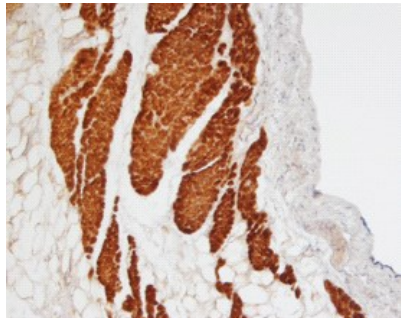
Species Reactivity	Human
Specificity	Detects human MyBPC3 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant mouse MyBPC3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MyBPC3 Arg1001-Lys1103 Accession # Q14896
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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human MyBPC3 by Western Blot. Western blot shows lysates of human heart tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human MyBPC3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7439) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for MyBPC3 at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p>Immunohistochemistry</p>  <p>MyBPC3 in Human Heart. MyBPC3 was detected in immersion fixed paraffin-embedded sections of human heart using Sheep Anti-Human MyBPC3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7439) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm of muscle cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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 C3; also cardiac MyBP-C, and C-protein, cardiac muscle isoform) is a 150-165 kDa member of the MyBP family, immunoglobulin superfamily of molecules. MyBP-C is expressed in striated muscle and exists in three isoforms; C1, C2, and C3. C1 and C2 are associated with slow and fast skeletal muscle, and may coexist in the same myofiber. The C3 isoform is cardiac specific, and is found in the two dark C-zones that flank the M line of the sarcomere A-band. The A-band contains both actin and myosin, and MyBPC3 forms structures that cross-link the resident actin and myosin filaments. MyBPC3 is reported to interact with titin and light meromyosin with its C-terminus, and actin plus myosin heavy chain with its N-terminus. Human MyBPC3 is 1273 amino acids (aa) in length. It contains one N-terminal I-set Ig-like domain (aa 12-94), a C2-type Ig-like domain (aa 153-256) followed by a phosphorylated myosin-binding region (aa 258-352), four C2-type Ig-like domains (aa 362-770) and three FN type III repeats interspersed with two C2-type Ig-like domains (aa 771-1273). There is one potential alternative start site at Met348. Over aa 1001-1103, human MyBPC3 shares 89% aa identity with mouse MyBPC3.