

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse                                                                                                                                                                                                                                                                 |
| <b>Specificity</b>        | Detects human and mouse MyBPC3 in Western blots and in direct ELISAs.                                                                                                                                                                                                       |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse MyBPC3<br>Arg998-Lys1100<br>Accession # O70468                                                                                                                                                                                    |
| <b>Conjugate</b>          | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

MyBPC3 (Myosin-binding protein C-cardiac type) is a 140-150 kDa member of the MyBP family, Ig superfamily of proteins. It is expressed in cardiac muscle, and contributes both to myosin filament structure by interacting with light meromyosin, and the regulation of contraction by binding to myosin subfragment-2, which results in a reduction of actomyosin ATPase activity. Mouse MyBPC3 is 1270 amino acids (aa) in length. It contains five consecutive C2-type Ig-like domains (aa 151-767), three FN type III repeats (aa 768-958), and two additional C-terminal Ig-like domains (aa 967-1270). There are at least three utilized phosphorylation sites and one Pro-rich region (aa 100-150). In human, multiple mutations generate variable-length premature truncated forms of MyBPC3. There are two potential isoform variants. One basically shows a six aa substitution for aa 339-344, while a second contains the same six aa substitution coupled to an eight aa extension at the N-terminus. Over aa 998-1100, mouse MyBPC3 shares 89% and 95% aa identity with human and rat MyBPC3, respectively.

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