Mouse MyBPC3 Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 751631

Catalog Number: FAB7199N

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MyBPC3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human MyBPC3 is observed.
Source	Monoclonal Rat IgG_1 Clone # 751631
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse MyBPC3 Pro2-Ser169 Accession # O70468
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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 meromysin, 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. MyBPC3 is a thick filament-associated protein located in the crossbridge region of cardiac muscle sarcomeres. It is known to be a physiological substrate of cAMP-dependent protein kinase. MyBPC3 has a role in sarcomeric structure and in the regulation of cardiac muscle contraction. MyBPC3 is released into the coronary effluent during myocardial infarction. Mutations in MYBPC3 are associated with hypertrophic cardiomyopathy. Within aa 2-169, mouse MyBPC3 shares 71% and 85% aa sequence identity with human and rat MyBPC3, respectively.

PRODUCT SPECIFIC NOTICES

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