

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human MYH7 in direct ELISAs and Western blots. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 940906 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | Human MYH7 synthetic peptide Accession # P12883 |
| 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 either lyophilized or 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 | 0.5 µg/mL | See Below |
| Immunohistochemistry | 1-25 µg/mL | See Below |

DATA

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| <p>Western Blot</p> | <p>Detection of Human MYH7 by Western Blot. Western blot shows lysates of human skeletal muscle tissue and human heart (atrium) tissue. PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human MYH7 Monoclonal Antibody (Catalog # MAB9096) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for MYH7 at approximately 230 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p>Immunohistochemistry</p> <p>MYH7 in Human Heart. MYH7 was detected in immersion fixed paraffin-embedded sections of human heart using Mouse Anti-Human MYH7 Monoclonal Antibody (Catalog # MAB9096) at 1 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in cardiomyocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p> |
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PREPARATION AND STORAGE

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| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| 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

MYH7 encodes the beta myosin heavy chain (MHC-β) which is a component of cardiac muscle myosin mainly expressed in the ventricle of fetal heart and represents the minority myosin in the adult heart. This is the 'slow form' of cardiac myosin as opposed to the 'fast form' (MYH6, aka MHC-α) expressed more predominantly in the atria of the fetal heart and is the predominant myosin in the adult heart. The two isoforms of cardiac MHCα and β display 93% homology but have significantly different enzymatic properties, with α having 150-300% the contractile velocity and 60-70% actin attachment time as that of β. Several mutations in MYH7 have been associated with inherited cardiomyopathies paraspinal and proximal muscle atrophy. MYH7 is a 223 kDa protein composed of 1935 amino acids.