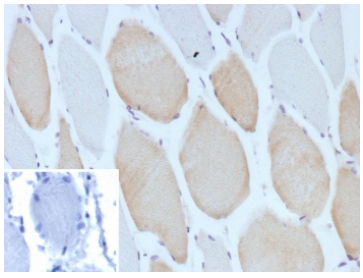
Myosin 7 Antibody / MYH7 [clone MYH7/13050R] (V5768)

Catalog No.	Formulation	Size
V5768-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5768-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5768SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

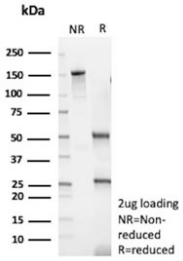
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MYH7/13050R
Purity	Protein A affinity
UniProt	P12883
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Myosin 7 antibody is available for research use only.



Immunohistochemistry analysis of Myosin 7 / MYH7 antibody (clone MYH7/13050R) in human skeletal muscle tissue. FFPE human skeletal muscle section shows cytoplasmic brown chromogenic staining in a subset of muscle fibers consistent with type I slow-twitch fiber expression of MYH7, while adjacent fibers show weaker or minimal staining and nuclei appear blue. The inset shows PBS used in place of primary antibody as a negative control with no specific staining observed. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free recombinant Myosin 7 antibody (clone MYH7/13050R) as confirmation of integrity and purity.

Description

Myosin 7 antibody (clone MYH7/13050R) targets Myosin 7, a contractile motor protein encoded by the human MYH7 gene and a major component of type I slow-twitch muscle fibers and cardiac muscle. Myosin 7, also widely referred to as MYH7 in molecular and clinical literature, is commonly known as beta-myosin heavy chain in the heart. Myosin 7 antibody is frequently used in studies of cardiac muscle biology, skeletal muscle fiber typing, and cardiomyopathy research because MYH7 plays a central role in sarcomere structure and force generation.

MYH7 encodes the beta-myosin heavy chain isoform that is highly expressed in ventricular myocardium and in slow oxidative skeletal muscle fibers. The protein forms thick filaments within the sarcomere and interacts with actin filaments to generate contractile force through ATP-dependent motor activity. Myosin 7 antibody clone MYH7/13050R is useful for detecting MYH7 expression in cardiac tissue and for distinguishing slow-twitch from fast-twitch skeletal muscle fibers in research applications.

Mutations in the MYH7 gene are strongly associated with inherited cardiomyopathies, including hypertrophic cardiomyopathy and dilated cardiomyopathy, as well as certain skeletal myopathies. Altered MYH7 expression and isoform switching are also observed in cardiac remodeling and heart failure. Because of its importance in sarcomere function and disease, Myosin 7 antibody supports investigation of cardiac contractile machinery and muscle fiber composition in normal and pathological tissues.

Structurally, Myosin 7 contains a globular head domain responsible for ATP hydrolysis and actin binding, a neck region interacting with light chains, and a long coiled-coil tail domain that mediates thick filament assembly. A Myosin 7 antibody such as recombinant monoclonal antibody clone MYH7/13050R is suitable for detecting MYH7 expression in cardiac and skeletal muscle tissues in research settings.

Application Notes

Optimal dilution of the Myosin 7 antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1150-1350 from human MYH7 protein was used as the immunogen for the Myosin 7 antibody.

Storage

Aliquot the Myosin 7 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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