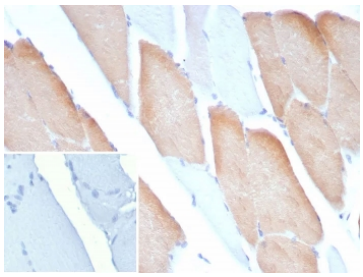
MYH7 Antibody / Myosin 7 [clone MYH7/9183] (V5474)

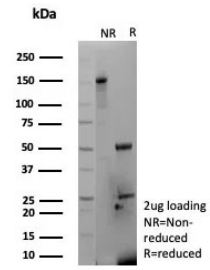
Catalog No.	Formulation	Size
V5474-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5474-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5474SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MYH7/9183
Purity	Protein A/G affinity
UniProt	P12883
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This MYH7 antibody is available for research use only.



Immunohistochemistry analysis of MYH7 / Myosin 7 antibody (clone MYH7/9183) 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 display 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.



SDS-PAGE analysis of purified, BSA-free MYH7 antibody (clone MYH7/9183) as confirmation of integrity and purity.

Description

MYH7 antibody (clone MYH7/9183) targets Myosin 7, a sarcomeric motor protein encoded by the human MYH7 gene and a principal component of cardiac muscle and slow-twitch skeletal muscle fibers. Myosin 7, also widely known as beta-myosin heavy chain in cardiac tissue, plays a central role in contractile force generation. MYH7 antibody is commonly used in studies of cardiac muscle biology, skeletal muscle fiber typing, and inherited cardiomyopathies because MYH7 expression defines slow oxidative muscle fibers and ventricular myocardium.

The MYH7 gene encodes the beta-myosin heavy chain isoform that is highly expressed in ventricular cardiac muscle and in type I slow-twitch skeletal muscle fibers. The protein assembles into thick filaments within the sarcomere and interacts with actin filaments through ATP-dependent motor activity to generate contraction. MYH7 antibody clone MYH7/9183 supports detection of MYH7 expression in muscle tissues and is useful for distinguishing slow-twitch from fast-twitch muscle fiber populations in research applications.

Mutations in MYH7 are strongly associated with inherited cardiomyopathies, including hypertrophic cardiomyopathy and dilated cardiomyopathy, as well as certain skeletal myopathies. Altered MYH7 expression and isoform shifts are also observed in cardiac remodeling, heart failure, and developmental transitions in muscle fiber composition. Because of its importance in sarcomere integrity and contractile performance, MYH7 antibody is widely applied in cardiovascular and neuromuscular research.

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. An MYH7 antibody such as clone MYH7/9183 is suitable for detecting Myosin 7 expression in cardiac and skeletal muscle tissues in research settings.

Application Notes

Optimal dilution of the MYH7 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (within amino acids 1150-1350) of human Myosin 7 protein was used as the immunogen for the MYH7 antibody.

Storage

Aliquot the MYH7 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.