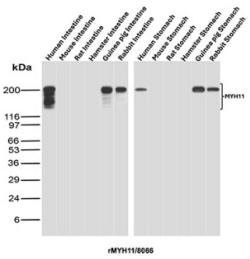
MYH11 Antibody / Smooth Muscle Contractile Protein Antibody [clone rMYH11/8066] (V4421)

Catalog No.	Formulation	Size
V4421-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4421-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4421SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

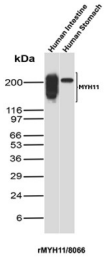
Recombinant MOUSE MONOCLONAL

Bulk quote request

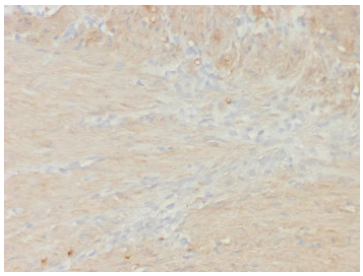
Availability	1-3 business days
Species Reactivity	Human, Rabbit, Guinea pig
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rMYH11/8066
Purity	Protein A/G affinity
UniProt	P35749
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT (Human) Western blot: 2-4ug/ml (Human/Rabbit/Guinea pig)
Limitations	This MYH11 Antibody / Smooth Muscle Contractile Protein Antibody is available for research use only.



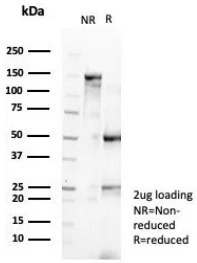
MYH11 Antibody Cross-Species Gastrointestinal WB. Western blot analysis of intestine and stomach tissue lysates from multiple species was performed using MYH11 antibody clone rMYH11/8066. Samples include human, mouse, rat, hamster, guinea pig, and rabbit intestine and stomach tissues. MYH11, also known as Smooth Muscle Myosin Heavy Chain, is a major component of the contractile apparatus and a highly specific marker of differentiated smooth muscle cells. Strong bands are detected at approximately 200 kDa in human, guinea pig, and rabbit intestine, consistent with the expected molecular weight of full length MYH11. Minor higher molecular weight species likely represent alternatively spliced isoforms or post-translationally modified forms. These results demonstrate the cross-species reactivity of recombinant MYH11 antibody and support its utility for studies of smooth muscle differentiation, gastrointestinal physiology, and comparative biology.



MYH11 Antibody Human Gastrointestinal Tissues WB. Western blot analysis of human intestine and human stomach tissue lysates was performed using MYH11 antibody clone rMYH11/8066. MYH11, also known as Smooth Muscle Myosin Heavy Chain, is a major contractile protein and a highly specific marker of differentiated smooth muscle cells. Prominent immunoreactive bands are detected at approximately 200 kDa in both tissues, corresponding to the expected molecular weight of full-length MYH11. The broader signal observed in intestine likely reflects the presence of multiple MYH11 isoforms and post-translationally modified species associated with visceral smooth muscle. These results support the utility of recombinant MYH11 antibody for studies of smooth muscle differentiation, gastrointestinal physiology, and contractile function.



MYH11 Antibody Colon Smooth Muscle IHC. Immunohistochemical staining of FFPE human colon smooth muscle tissue demonstrates MYH11 expression using recombinant MYH11 antibody clone rMYH11/8066. MYH11, also known as Smooth Muscle Myosin Heavy Chain, is a principal component of the contractile apparatus and a highly specific marker of differentiated smooth muscle cells. Diffuse cytoplasmic staining is observed throughout bundles of smooth muscle fibers within the muscularis propria, consistent with the abundant expression of MYH11 in visceral smooth muscle responsible for intestinal motility. 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. These results support the utility of MYH11 Antibody for studies of smooth muscle differentiation, gastrointestinal physiology, and contractile function.



SDS-PAGE analysis of purified, BSA-free recombinant MYH11 antibody (clone rMYH11/8066) as confirmation of integrity and purity.

Description

MYH11 Antibody / Smooth Muscle Contractile Protein Antibody recognizes Myosin Heavy Chain 11 (MYH11), a major component of the thick filaments that mediate force generation in smooth muscle cells. Recombinant mouse monoclonal clone rMYH11/8066 targets this highly specialized contractile protein, which is predominantly expressed in vascular, visceral, and genitourinary smooth muscle tissues. MYH11 functions through ATP dependent interactions with actin filaments to regulate contraction, vascular tone, gastrointestinal motility, and urinary tract function. Because of its highly restricted expression pattern, MYH11 is widely regarded as one of the most specific markers of mature smooth muscle differentiation.

MYH11 is essential for the maintenance of normal contractile activity and tissue integrity. Alternative splicing generates multiple isoforms that contribute to functional differences among smooth muscle tissues. MYH11 acts together with alpha smooth muscle actin, calponin, and desmin to form the contractile apparatus responsible for maintaining vascular and visceral function. Expression of MYH11 is regulated by myocardin and serum response factor dependent pathways that coordinate smooth muscle differentiation and phenotypic plasticity.

Altered MYH11 expression or mutations in the MYH11 gene have been linked to familial thoracic aortic aneurysm, patent ductus arteriosus, and other vascular disorders. In diagnostic pathology, MYH11 serves as a highly specific marker for identifying smooth muscle tumors and differentiating leiomyosarcoma from other spindle cell neoplasms. Detection of MYH11 using recombinant mouse monoclonal clone rMYH11/8066 is also valuable for assessing vascular integrity and smooth muscle differentiation during development and tissue remodeling.

MYH11 is additionally involved in chromosomal rearrangements associated with acute myeloid leukemia, where CBFB-MYH11 fusion proteins contribute to leukemogenesis. The protein therefore has importance in both solid tissue pathology and hematologic malignancies. Owing to its specificity and biologic significance, MYH11 remains a valuable target for studies of contractility, vascular biology, and smooth muscle disease.

MYH11 Antibody / Smooth Muscle Contractile Protein Antibody is useful for investigations of cardiovascular biology, smooth muscle pathology, gastrointestinal physiology, and developmental biology. Detection of endogenous MYH11 provides a valuable tool for studies of tissue remodeling, contractility, and diseases associated with altered smooth muscle differentiation.

Visit our SMMHC Antibody page to discover additional antibodies against this Smooth Muscle Differentiation Marker, including reagents for studies of vascular biology, contractility, and smooth muscle pathology.

Application Notes

Optimal dilution of the MYH11 Antibody / Smooth Muscle Contractile Protein Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human protein was used as the immunogen for the recombinant MYH11 antibody.

Storage

Aliquot the recombinant MYH11 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Smooth Muscle Myosin Heavy Chain Antibody, SMMHC Antibody, SM-MHC Antibody, Myosin Heavy Chain 11 Antibody, Smooth Muscle Myosin Antibody, Contractile Smooth Muscle Marker Antibody, SM2 Myosin Antibody

Copyright © NSJ Bioreagents. All rights reserved.