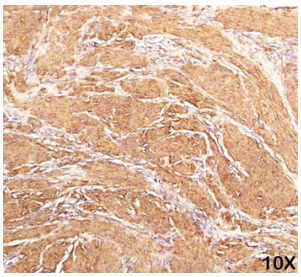
Muscle Actin Antibody HHF35 / Pan Muscle Actin Antibody [clone HHF35] (V2318)

Catalog No.	Formulation	Size
V2318-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2318-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20
V2318SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100
V2318IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7

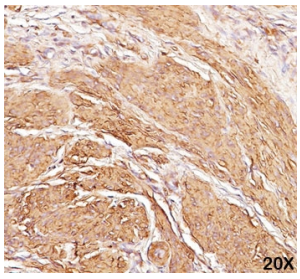
Citations (20)

Bulk quote request

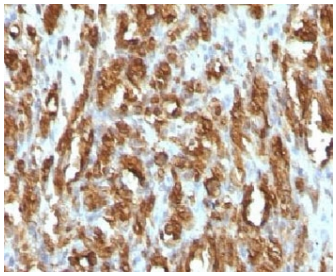
Species Reactivity	Human, Mouse
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HHF35
Purity	Protein G affinity chromatography
UniProt	P62736, P68032, P68133
Gene ID	58, 59, 70
Localization	Cytoplasmic
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 0.25-0.5ug/ml for 30 min at RT
Limitations	This Muscle Actin Antibody HHF35 / Pan Muscle Actin Antibody is available for research use only.



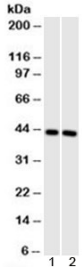
Muscle Actin Antibody HHF35 by IHC in Human Leiomyosarcoma at 10X. Immunohistochemistry staining of human leiomyosarcoma tissue using mouse monoclonal Muscle Actin antibody HHF35. Widespread brown cytoplasmic immunoreactivity is observed throughout the tumor, with staining following the elongated and interlacing arrangement of smooth muscle-derived cells. Pale stromal regions separate the positively stained tumor bundles, providing contrast with the surrounding tissue. This low-magnification image demonstrates the broad distribution of muscle-specific actin expression within the tumor and illustrates the utility of this Pan Muscle Actin Antibody for characterizing smooth muscle differentiation.



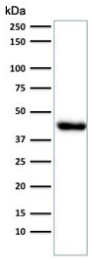
Muscle Actin Antibody HHF35 by IHC Showing Smooth Muscle Differentiation at 20X. Immunohistochemistry staining of human leiomyosarcoma tissue using mouse monoclonal Muscle Actin antibody HHF35. At higher magnification, prominent brown cytoplasmic staining is visible in elongated tumor cells arranged in intersecting bundles. The staining highlights the distribution of muscle-associated actin within the tumor cell cytoplasm, while intervening stromal regions exhibit substantially weaker staining. This image provides a closer view of the cellular staining pattern observed in the corresponding 10X image and demonstrates detection of muscle-specific actin in smooth muscle-derived neoplastic tissue.



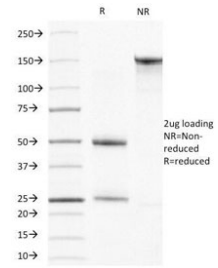
Muscle Actin Antibody HHF35 by IHC in Human Rhabdomyosarcoma. Immunohistochemistry staining of FFPE human rhabdomyosarcoma tissue using mouse monoclonal Muscle Actin antibody HHF35. Strong brown cytoplasmic immunoreactivity is visible in numerous tumor cells, with variation in staining intensity across the tissue. The positive cells display irregular and elongated morphologies, consistent with the heterogeneous appearance of muscle-derived neoplastic cells. The staining demonstrates detection of muscle-associated actin in a tumor exhibiting skeletal muscle differentiation, complementing the leiomyosarcoma images and illustrating the broad recognition profile of this Pan Muscle Actin Antibody.



Muscle Actin Antibody HHF35 by WB in Human and Mouse Muscle Lysates. Western blot analysis of human muscle lysate (lane 1) and mouse muscle cell lysate (lane 2) using mouse monoclonal Muscle Actin antibody HHF35. A prominent immunoreactive band is detected near 42 kDa in both samples, consistent with the expected molecular weight of muscle actin isoforms. The bands exhibit similar electrophoretic mobility, supporting antibody recognition of conserved muscle-associated actin proteins in human and mouse samples. Minimal additional reactivity is visible in the displayed blot. These results demonstrate detection of muscle-specific actin in two species and support the use of clone HHF35 for studying contractile cytoskeletal proteins.



Muscle Actin Antibody HHF35 by WB in Human Endometrium Muscle Lysate. Western blot analysis of human endometrium muscle lysate using mouse monoclonal Muscle Actin antibody HHF35. A strong immunoreactive band is detected near 42 kDa, consistent with the expected molecular weight of muscle-associated actin isoforms. The signal appears as a relatively discrete band with minimal additional reactivity in the displayed molecular weight range. Smooth muscle actin is an important component of the uterine contractile apparatus, and this result demonstrates recognition of muscle-associated actin in a human tissue-derived lysate. The experiment provides additional western blot validation alongside the human and mouse muscle samples.



Muscle Actin Antibody HHF35 by SDS-PAGE Showing Antibody Integrity and Purity. SDS-PAGE analysis of purified, BSA-free mouse monoclonal Muscle Actin antibody HHF35. Approximately 2 ug of purified antibody was loaded under non-reducing (NR) and reducing (R) conditions. The non-reduced sample shows a prominent band near 150 kDa, consistent with intact IgG. Under reducing conditions, bands are visible near 50 kDa and 25 kDa, corresponding to the immunoglobulin heavy and light chains, respectively. This analysis confirms the expected molecular composition of the purified antibody preparation and serves as a quality-control assessment rather than direct validation of muscle actin recognition.

Description

Muscle Actin Antibody HHF35 recognizes muscle-associated actin isoforms expressed in skeletal, cardiac, and smooth muscle cells. Actins are highly conserved cytoskeletal proteins responsible for maintaining cellular structure, generating contractile force, and supporting cell movement. The muscle-specific actin family includes alpha-skeletal actin (ACTA1), alpha-cardiac actin (ACTC1), alpha-smooth muscle actin (ACTA2), and gamma-smooth muscle actin (ACTG2). These proteins contribute to the specialized contractile machinery of different muscle tissues and serve as markers of muscle differentiation.

Actin monomers polymerize into filamentous actin (F-actin), forming structures that interact with myosin to produce mechanical force. In skeletal and cardiac muscle, actin filaments are organized into sarcomeres, where their interactions with myosin drive contraction. Smooth muscle cells contain contractile actin networks that regulate vascular tone, gastrointestinal motility, and other involuntary movements. Although muscle actin isoforms share considerable sequence similarity, their expression patterns and functional specialization differ among tissues.

Clone HHF35 is a widely established monoclonal antibody that recognizes muscle-specific alpha and gamma actin isoforms. Its broad reactivity makes it useful as a Pan Muscle Actin Antibody for identifying muscle differentiation across multiple tissue types. Unlike antibodies directed against a single actin isoform, HHF35 recognizes actins associated with skeletal, cardiac, and smooth muscle lineages. The antibody generally does not react with nonmuscle mesenchymal cells, apart from certain myoepithelial populations.

Muscle actin expression is particularly relevant to the characterization of soft tissue tumors. Leiomyomas and leiomyosarcomas frequently express smooth muscle-associated actins, while rhabdomyomas and rhabdomyosarcomas exhibit skeletal muscle differentiation. Immunohistochemical detection of muscle actin can therefore contribute to the characterization of tumor phenotypes when interpreted alongside other lineage markers, including desmin, myogenin, and smooth muscle myosin. Expression patterns may vary with tumor differentiation and tissue context.

NSJ Bioreagents offers clone HHF35 for research investigating muscle differentiation, cytoskeletal organization, and muscle-associated tumor markers. A Muscle Actin Antibody HHF35 provides broad detection of muscle-specific actin isoforms in studies of normal and neoplastic muscle tissues.

For additional antibodies targeting muscle-specific and nonmuscle actin isoforms involved in cytoskeletal organization, cellular structure, and contraction, explore our Actin Antibodies collection.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Muscle Actin Antibody HHF35 / Pan Muscle Actin Antibody to be titered up or down for optimal performance.

1. No special pretreatment is required for the IHC staining of formalin-fixed, paraffin-embedded tissues.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

SDS extract of human myocardium was used as the immunogen for this Muscle Actin Antibody HHF35.

Storage

Store the Muscle Actin Antibody HHF35 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Muscle actin antibodyPan Muscle Actin antibody, Muscle Specific Actin antibody, Muscle Actin HHF35 antibody, Muscle Alpha Actin antibody, Muscle Gamma Actin antibody, Sarcomeric Actin antibody, Smooth Muscle Actin antibody, Cardiac Muscle Actin antibody, Skeletal Muscle Actin antibody

References (2)

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