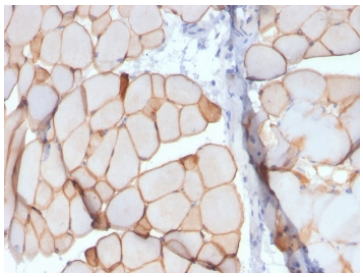
Dystrophin Antibody / Muscle Membrane Structural Protein Antibody [clone DMD/3241] (V7547)

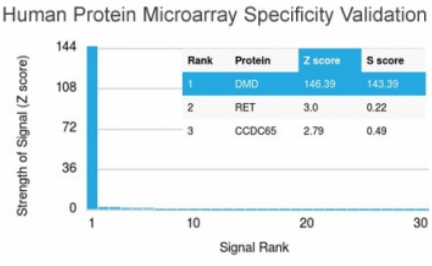
Catalog No.	Formulation	Size
V7547-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7547-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7547SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7547IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

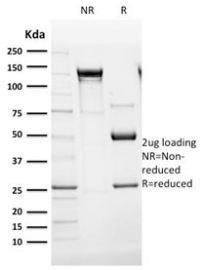
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	DMD/3241
Purity	Protein G affinity chromatography
UniProt	P11532
Localization	Cell surface, cytoplasmic
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Dystrophin Antibody / Muscle Membrane Structural Protein Antibody is available for research use only.



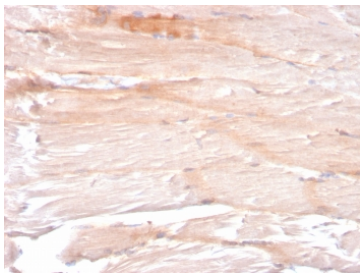
Dystrophin Antibody Skeletal Muscle IHC. Immunohistochemistry analysis of FFPE skeletal muscle tissue using Dystrophin Antibody (clone DMD/3241) shows strong membranous staining outlining muscle fibers, consistent with dystrophin localization at the sarcolemma. The continuous circumferential staining pattern highlights intact muscle fiber membranes, while surrounding connective tissue displays minimal background signal. Hematoxylin counterstain provides nuclear contrast and tissue architecture. HIER: boil FFPE tissue sections in pH 6 10 mM citrate buffer for 10-20 min and allow to cool before testing.



Dystrophin Antibody HuProt Microarray Specificity. Protein microarray analysis using Dystrophin Antibody (clone DMD/3241) demonstrates highly specific binding to DMD / Dystrophin, with the target protein ranked as the top hit and showing a strong Z score with clear separation from all other proteins on the array. Signal intensity decreases sharply for non-target proteins, supporting selective recognition with minimal off-target interaction. Z score represents the strength of signal in standard deviations above the mean of all array signals, while S score reflects the separation between ranked targets and provides a measure of relative specificity.



SDS-PAGE analysis of purified, BSA-free Dystrophin antibody (clone DMD/3241) as confirmation of integrity and purity.



Dystrophin Antibody Skeletal Muscle Fiber IHC. Immunohistochemistry analysis of FFPE skeletal muscle tissue using Dystrophin Antibody (clone DMD/3241) shows reduced and discontinuous membranous staining along individual muscle fibers, consistent with altered dystrophin localization at the sarcolemma. The fragmented staining pattern contrasts with the continuous membrane outline typically observed in normal muscle, supporting detection of dystrophin in a context of compromised muscle fiber integrity. Hematoxylin counterstain provides nuclear contrast and tissue architecture. HIER: boil FFPE tissue sections in pH 6 10 mM citrate buffer for 10-20 min and allow to cool before testing.

Description

Dystrophin (DMD) is a large cytoskeletal protein that plays a critical role in maintaining the structural integrity of muscle fibers by linking the intracellular actin cytoskeleton to the extracellular matrix through the dystrophin-associated protein complex. Dystrophin Antibody / Muscle Membrane Structural Protein Antibody is designed to detect this essential protein in biological systems where muscle structure and integrity are of interest. The DMD gene, located on chromosome Xp21, encodes dystrophin, one of the largest known human proteins, which is fundamental to normal muscle function.

The Dystrophin antibody, also referred to as DMD antibody in the literature, recognizes a protein that localizes primarily to the sarcolemma of skeletal and cardiac muscle cells. Dystrophin functions as a stabilizing scaffold, protecting muscle fibers from mechanical stress during contraction and relaxation cycles. Loss or reduction of dystrophin expression leads to membrane fragility and muscle degeneration, as observed in disorders such as Duchenne and Becker muscular dystrophy.

This Dystrophin Antibody / Muscle Membrane Structural Protein Antibody is uniquely positioned for studies of muscle biology and neuromuscular disease. In immunohistochemistry, dystrophin is typically observed as strong membranous staining outlining muscle fibers, reflecting its localization at the sarcolemma. This staining pattern provides a clear marker

for muscle fiber integrity and is widely used to assess dystrophin expression in normal and diseased tissue.

Dystrophin is essential for maintaining muscle cell stability, and its absence or dysfunction results in progressive muscle weakness and degeneration. In Duchenne muscular dystrophy, mutations in the DMD gene lead to a near-complete loss of dystrophin, while Becker muscular dystrophy is characterized by partially functional protein variants. Detection of dystrophin expression is therefore critical for studies of muscle pathology, disease progression, and therapeutic response.

The mouse monoclonal clone DMD/3241 provides reliable detection of dystrophin, supported by protein microarray specificity validation data demonstrating selective binding to the intended target. This Dystrophin Antibody / Muscle Membrane Structural Protein Antibody is suitable for detecting dystrophin expression in research applications focused on muscle structure, neuromuscular disease, and cytoskeletal organization. Its performance supports detailed evaluation of dystrophin localization and expression across normal and pathological muscle tissue.

This antibody supports investigation of muscle membrane integrity, cytoskeletal organization, and disease-associated changes in dystrophin expression. It is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Dystrophin Antibody / Muscle Membrane Structural Protein Antibody should be determined by the researcher.

1. 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

Amino acids 114-263 from the human protein were used as the immunogen for the Dystrophin antibody.

Storage

Store the Dystrophin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Dystrophin antibody, DMD antibody, Dystrophin protein antibody, DMD muscle protein antibody, Dystrophin cytoskeletal protein antibody