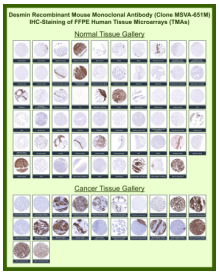
Desmin Antibody for IHC / DES Immunohistochemistry Antibody [clone MSVA-651M] (V5869)

Catalog No.	Formulation	Size
V5869-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5869-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-651M
UniProt	P17661
Localization	Cell membrane, Cytoplasm, Myofibril, Nucleus, Sarcolemma, Sarcomere, Z line
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This Desmin Antibody for IHC / DES Immunohistochemistry Antibody is available for research use only.



Desmin Antibody for IHC Tissue Microarray (TMA) Multi-Tissue Expression. Immunohistochemistry analysis of Desmin (DES) expression in FFPE human tissue microarray (TMA) sections using Desmin Antibody for IHC clone MSVA-651M demonstrates strong cytoplasmic HRP-DAB brown staining in skeletal muscle, cardiac muscle, and smooth muscle compartments, including vascular and gastrointestinal muscular layers, while epithelial and lymphoid tissues remain largely negative. In cancer tissue microarrays, diffuse cytoplasmic staining is observed in tumors with myogenic differentiation, including leiomyoma, leiomyosarcoma, and rhabdomyosarcoma, with minimal staining in non-myogenic malignancies. The staining pattern supports Desmin as a muscle lineage marker for immunohistochemistry-based tumor classification. Observed expression profiles across TMA cores are consistent with reference datasets such as the Human Protein Atlas, and heat-induced epitope retrieval was performed prior to staining to ensure optimal antigen detection in FFPE sections.

Description

Desmin (DES) is a muscle-specific intermediate filament protein that plays a critical role in maintaining the structural organization and mechanical integrity of muscle cells. It is expressed in skeletal, cardiac, and smooth muscle tissues, where it forms a cytoplasmic filament network linking contractile apparatus to cellular architecture. In immunohistochemistry, Desmin is characteristically detected as strong cytoplasmic staining within muscle cells, making it a cornerstone marker for identifying myogenic differentiation. Desmin Antibody for IHC is widely used in formalin-fixed, paraffin-embedded tissues to visualize muscle lineage cells and evaluate tumor origin in histopathological analysis. This antibody can be compared with our Desmin Antibody (clone DES/2960R) for detection of desmin as a muscle marker with validation supported by gene knockdown.

Desmin antibody, also referred to as DES antibody or muscle intermediate filament antibody in the literature, recognizes a cytoplasmic protein with highly restricted expression in muscle tissues. This Desmin Antibody for IHC is specifically optimized for Tissue Microarray (TMA)-based immunohistochemistry, enabling standardized, high-throughput evaluation of staining patterns across large panels of normal and cancer tissues. In normal tissue TMAs, strong and consistent cytoplasmic HRP-DAB brown staining is observed in skeletal muscle fibers, cardiac myocytes, and smooth muscle layers of organs such as the gastrointestinal tract and blood vessels, while epithelial, lymphoid, and most non-muscle stromal compartments remain negative, providing excellent contrast for interpretation.

In cancer tissue microarrays, Desmin expression is robustly detected in tumors of muscle origin, including leiomyomas, leiomyosarcomas, and rhabdomyosarcomas, where diffuse cytoplasmic staining highlights tumor cells with myogenic differentiation. This staining pattern is particularly valuable in distinguishing soft tissue tumors with muscle lineage from morphologically similar neoplasms lacking Desmin expression. In contrast, carcinomas and most non-myogenic tumors typically show absent staining, reinforcing the specificity of Desmin Antibody for IHC in differential diagnosis and tumor classification. The ability to evaluate these lineage-specific patterns across hundreds of TMA cores enables consistent comparison of staining intensity and distribution across diverse tumor types.

Tissue Microarray (TMA) analysis provides a powerful framework for assessing DES expression under uniform staining conditions, demonstrating highly reproducible results with strong signal in muscle-derived tissues and tumors alongside minimal background in non-expressing cell populations. The performance of clone MSVA-651M in TMA-based IHC highlights its ability to generate clear, well-defined cytoplasmic staining across a wide spectrum of tissues, supporting its use in large-scale immunohistochemistry studies, biomarker validation, and comparative tissue profiling.

This antibody targets Desmin in research applications requiring precise and interpretable immunohistochemical detection of muscle lineage markers in FFPE tissue sections, making it well suited for studies of myogenic differentiation, soft tissue tumor classification, and muscle-associated disease biology.

This antibody is part of the Desmin antibody collection, where additional DES antibodies can be explored.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the Desmin Antibody for IHC / DES Immunohistochemistry Antibody should be determined by the researcher.

2. This DES/Desmin antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human desmin protein was used as the immunogen for the DES/Desmin antibody.

Storage

DES/Desmin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

DES antibody, Desmin IHC antibody, Muscle intermediate filament antibody, Desmin immunohistochemistry antibody, DES muscle marker antibody