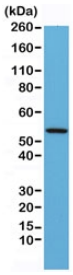
# Recombinant Desmin Antibody [clone RM234] (R20261)

| Catalog No. | Formulation | Size |
|---|---|---|
| R20261-0.1ML | Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide | 100 ul |

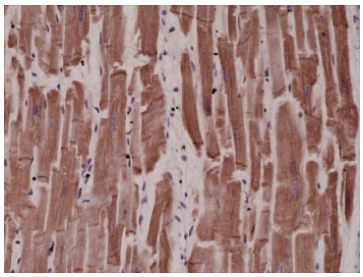
Recombinant RABBIT MONOCLONAL

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human, Mouse |
| **Predicted Reactivity** | Rat, Bovine |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG |
| **Clone Name** | RM234 |
| **Purity** | Protein A purified from animal origin-free supernatant |
| **UniProt** | P17661 |
| **Gene ID** | 1674 |
| **Localization** | Cytoplasmic, membranous |
| **Applications** | Immunohistochemistry (FFPE) : 1:1000-1:4000 (1)<br>Western Blot : 1:1000-1:2000 |
| **Limitations** | This recombinant Desmin antibody is available for research use only. |




Western blot testing of mouse heart lysate with recombinant Desmin antibody at 1:1000.
Predicted molecular weight ~54 kDa.



IHC testing of FFPE human heart tissue with recombinant Desmin antibody at 1:4000.

## Description

The Recombinant Desmin antibody is a recombinant reagent engineered to detect desmin, a type III intermediate filament protein that provides structural support and mechanical stability in muscle cells. Desmin is encoded by the DES gene and is expressed in skeletal, cardiac, and smooth muscle, where it forms a filamentous network linking myofibrils to each other and to the plasma membrane. This cytoskeletal scaffold ensures coordinated contraction and maintains the structural integrity of muscle fibers. The Recombinant Desmin antibody enables reliable detection of this key muscle marker across multiple experimental platforms.

Structurally, desmin contains a central alpha-helical rod domain flanked by head and tail regions that mediate filament assembly and interactions with other cytoskeletal proteins. Desmin filaments anchor at specialized structures such as Z-discs, costameres, and intercalated discs, where they connect the contractile apparatus to the cytoskeleton and extracellular matrix. This structural organization allows force generated by sarcomeres to be transmitted efficiently across the muscle cell. Mutations in DES or defects in desmin filament assembly are associated with a group of disorders known as desmin-related myopathies, which include progressive muscle weakness, cardiomyopathy, and conduction defects.

In laboratory applications, the Recombinant Desmin antibody is widely used as a marker for muscle differentiation and development. In immunohistochemistry, it highlights desmin filaments in cardiac and skeletal muscle tissues, supporting both diagnostic pathology and developmental studies. In immunofluorescence, the antibody reveals a filamentous cytoplasmic network, allowing visualization of cytoskeletal organization in cultured myoblasts or differentiated muscle cells. In western blotting, the Recombinant Desmin antibody detects desmin protein expression, enabling quantitative analysis in muscle tissues and cell lysates. Recombinant production ensures consistency across lots, providing reproducible results in both research and diagnostic applications.

The Recombinant Desmin antibody is especially valuable in pathology for distinguishing muscle tumors such as rhabdomyosarcomas and leiomyosarcomas, where desmin serves as a diagnostic marker. It is also widely applied in regenerative medicine and stem cell biology to monitor differentiation of progenitor cells into the muscle lineage. Synonym phrases such as recombinant DES antibody, recombinant muscle filament antibody, and recombinant cytoskeletal desmin antibody broaden product discoverability for researchers using alternate terminology.

By delivering validated and reproducible detection, the Recombinant Desmin antibody provides scientists and clinicians with a dependable tool for studying muscle cytoskeleton, differentiation, and disease. NSJ Bioreagents ensures strict quality control of this reagent, supporting reliable use in immunohistochemistry, immunofluorescence, and western blotting. With its specificity for desmin, the Recombinant Desmin antibody is indispensable for muscle biology, pathology, and translational research into myopathies and cardiomyopathies.

This recombinant Desmin antibody reacts to human and mouse Desmin. It may also react to the rat and bovine protein, as predicted by immunogen homology.

## Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Desmin antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

## Immunogen

A peptide corresponding to human Desmin was used as the immunogen for this recombinant Desmin antibody.

## Storage

Store the recombinant Desmin antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).