

Anti-Desmin Antibody
Mouse Monoclonal Antibody
Catalog # AH13163**Specification**

Anti-Desmin Antibody - Product Information

Application	,14,3,4,
Primary Accession	P17661
Other Accession	594952
Reactivity	Human, Rat, Hamster, Chicken
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Calculated MW	53536

Anti-Desmin Antibody - Additional Information**Gene ID** 1674**Other Names**

CMD1I; CSM1; CSM2; DES; Intermediate filament protein

Format

Tissue culture supernatant with 0.05% Azide. Contact us if you require it in a different format.

Storage

Store at 2 to 8°C. Antibody is stable for 24 months.

Precautions

Anti-Desmin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-Desmin Antibody - Protein Information**Name** DES**Function**

Muscle-specific type III intermediate filament essential for proper muscular structure and function. Plays a crucial role in maintaining the structure of sarcomeres, inter-connecting the Z-disks and forming the myofibrils, linking them not only to the sarcolemmal cytoskeleton, but also to the nucleus and mitochondria, thus providing strength for the muscle fiber during activity (PubMed: [25358400](http://www.uniprot.org/citations/25358400)). In adult striated muscle they form a fibrous network connecting myofibrils to each other and to the plasma membrane from the periphery of the Z- line structures (PubMed: [24200904](http://www.uniprot.org/citations/24200904), PubMed: [25394388](http://www.uniprot.org/citations/25394388), PubMed: [26724190](http://www.uniprot.org/citations/26724190)). May act as a sarcomeric microtubule-anchoring protein: specifically associates with detyrosinated tubulin-alpha

chains, leading to buckled microtubules and mechanical resistance to contraction. Required for nuclear membrane integrity, via anchoring at the cell tip and nuclear envelope, resulting in maintenance of microtubule-derived intracellular mechanical forces (By similarity). Contributes to the transcriptional regulation of the NKX2-5 gene in cardiac progenitor cells during a short period of cardiomyogenesis and in cardiac side population stem cells in the adult. Plays a role in maintaining an optimal conformation of nebulin (NEB) on heart muscle sarcomeres to bind and recruit cardiac alpha-actin (By similarity).

Cellular Location

Cytoplasm, myofibril, sarcomere, Z line. Cytoplasm Cell membrane, sarcolemma. Nucleus {ECO:0000250|UniProtKB:P31001}. Cell tip {ECO:0000250|UniProtKB:P31001}. Nucleus envelope {ECO:0000250|UniProtKB:P31001}. Note=Localizes in the intercalated disks which occur at the Z line of cardiomyocytes (PubMed:24200904, PubMed:26724190). Localizes in the nucleus exclusively in differentiating cardiac progenitor cells and premature cardiomyocytes (By similarity). PKP2 is required for correct anchoring of DES at the cell tip and nuclear envelope (By similarity) {ECO:0000250|UniProtKB:P31001, ECO:0000269|PubMed:24200904, ECO:0000269|PubMed:26724190}

Anti-Desmin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Desmin Antibody - Images



Formalin-fixed, paraffin-embedded human Leiomyosarcoma stained with Desmin Monoclonal Antibody (D33)

Anti-Desmin Antibody - Background

Cytoskeletal intermediate filaments (IFs) constitute a diverse group of proteins that are expressed in a highly tissue-specific manner. IFs are constructed from two-chain α -helical coiled-coil molecules arranged on an imperfect helical lattice, and have been widely used as markers for distinguishing individual cell types within a tissue and identifying the origins of metastatic tumors. Vimentin is an

IF general marker of cells originating in the mesenchyme. Vimentin and Desmin, a related class III IF, are both expressed during skeletal muscle development. Desmin, a 469 amino acid protein found near the Z line in sarcomeres, is expressed more frequently in adult differentiated state tissues. Anti-desmin detects cells of normal smooth, skeletal, and cardiac muscles. Antibody reacts with leiomyomas, leiomyosarcoma, rhabdomyomas, rhabdomyosarcoma, and perivascular cells of glomus tumors of the skin.