

**DESM Antibody**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1926b****Specification**

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**DESM Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">P17661</a>
Other Accession	<a href="#">NP_001918.3</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgM,k
Calculated MW	53536

**DESM Antibody - Additional Information****Gene ID** 1674**Other Names**

Desmin, DES

**Target/Specificity**

This DESM monoclonal antibody is generated from mouse immunized with DESM recombinant protein.

**Dilution**

WB~~1:500~1000

E~~Use at an assay dependent concentration.

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Euglobin precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

DESM Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**DESM 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](#)). 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](#), PubMed:[25394388](#), PubMed:[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

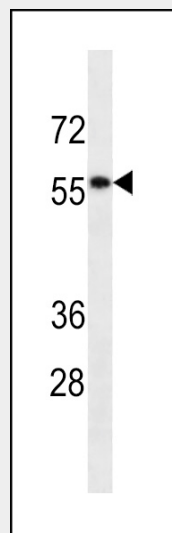
Cytoplasm, myofibril, sarcomere, Z line. Cytoplasm Cell membrane, sarcolemma. Nucleus {ECO:0000250|UniProtKB:P31001}. Cell tip {ECO:0000250|UniProtKB:P31001}. Nucleus envelope {ECO:0000250|UniProtKB:P31001}. Note=Localizes in the intercalated disks which occur at the Z line of cardiomyocytes (PubMed:24200904, 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}

#### DESM 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](#)

#### DESM Antibody - Images



DESM Antibody (Cat. #AM1926b) western blot analysis in CEM cell line lysates (35µg/lane). This demonstrates the DESM antibody detected the DESM protein (arrow).

#### **DESM Antibody - Background**

This gene encodes a muscle-specific class III intermediate filament. Homopolymers of this protein form a stable intracytoplasmic filamentous network connecting myofibrils to each other and to the plasma membrane. Mutations in this gene are associated with desmin-related myopathy, a familial cardiac and skeletal myopathy (CSM), and with distal myopathies. [provided by RefSeq].

#### **DESM Antibody - References**

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)  
van Spaendonck-Zwarts, K., et al. Clin. Genet. (2010) In press :  
Zimmerman, R.S., et al. Genet. Med. 12(5):268-278(2010)  
Bar, H., et al. J. Mol. Biol. 397(5):1188-1198(2010)  
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