

DES / Desmin Antibody (clone D33)
Mouse Monoclonal Antibody
Catalog # ALS14171

Specification

DES / Desmin Antibody (clone D33) - Product Information

Application	IHC
Primary Accession	P17661
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	54kDa KDa

DES / Desmin Antibody (clone D33) - Additional Information

Gene ID 1674

Other Names

Desmin, DES

Target/Specificity

This antibody is highly reactive with desmin. On immunoblots only the 52 kD desmin band is stained. Immunogen derived from human Leiomyoma.

Reconstitution & Storage

Store at 4°C.

Precautions

DES / Desmin Antibody (clone D33) is for research use only and not for use in diagnostic or therapeutic procedures.

DES / Desmin Antibody (clone D33) - 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}

Volume

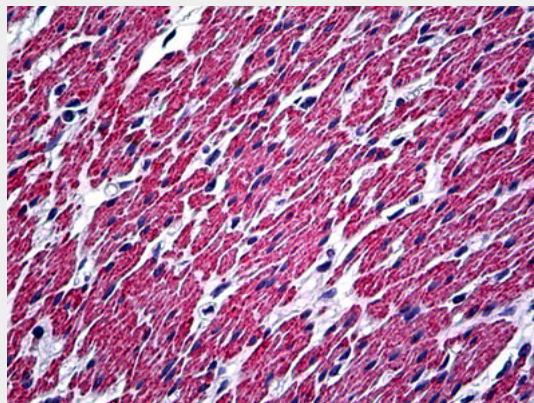
100 µl

DES / Desmin Antibody (clone D33) - Protocols

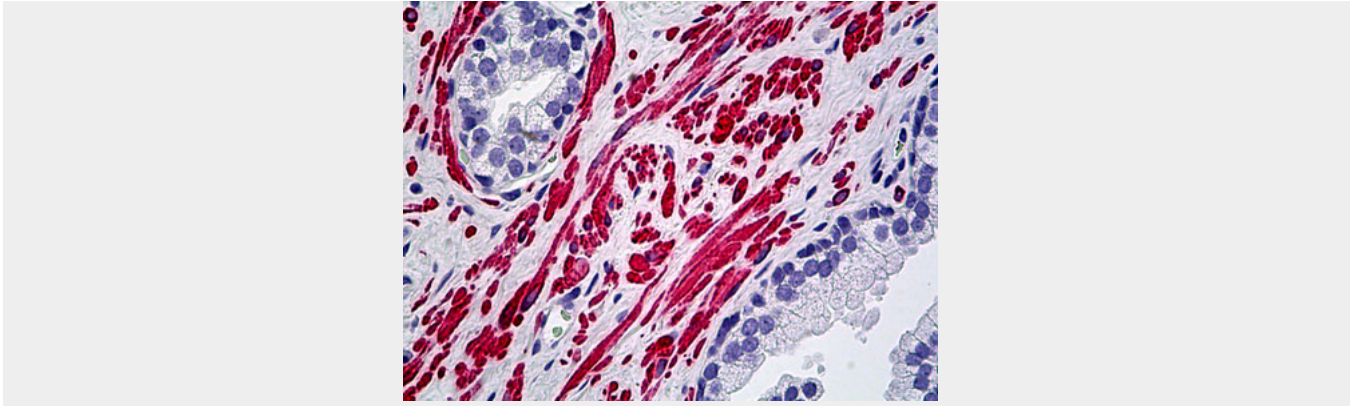
Provided below are standard protocols that you may find useful for product applications.

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

DES / Desmin Antibody (clone D33) - Images



Anti-DES / Desmin antibody IHC of human colon.



Anti-DES / Desmin antibody IHC of human prostate.

DES / Desmin Antibody (clone D33) - Background

Desmin are class-III intermediate filaments found in muscle cells. 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.

DES / Desmin Antibody (clone D33) - References

- Li Z.,et al.Gene 78:243-254(1989).
- Li Z.,et al.J. Biol. Chem. 266:6562-6570(1991).
- Vicart P.,et al.Hum. Genet. 98:422-429(1996).
- Goldfarb L.G.,et al.Nat. Genet. 19:402-403(1998).
- Li D.,et al.Circulation 100:461-464(1999).