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DES / Desmin Antibody (clone D9)

Mouse Monoclonal Antibody
Catalog # ALS14875

Specification

DES / Desmin Antibody (clone D9) - Product Information

Application	**IHC**
Primary Accession	P17661
Reactivity	**Human, Mouse, Rat, Rabbit, Pig, Chicken**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**54kDa KDa**

DES / Desmin Antibody (clone D9) - Additional Information

Gene ID 1674

Other Names
Desmin, DES

Target/Specificity
Reacts exclusively with desmin, which is expressed in smooth and striated muscle cells and their tumors e.g. rhabdomyosarcoma and leiomyosarcoma. Cross-reacts with most mammals.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
DES / Desmin Antibody (clone D9) is for research use only and not for use in diagnostic or therapeutic procedures.

DES / Desmin Antibody (clone D9) - 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 nebulette (NEB) on heart muscle sarcomeres to bind and recruit cardiac alpha-actin (By similarity).

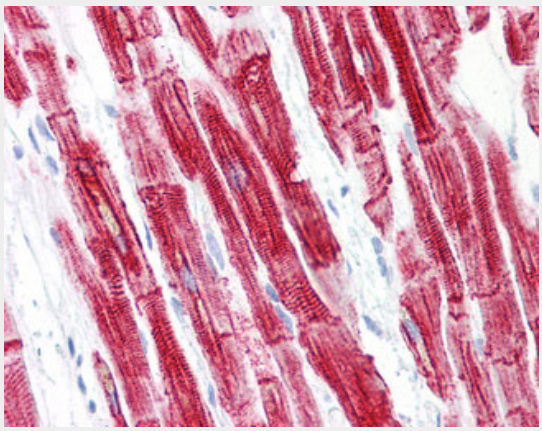
Cellular Location
Cytoplasm, myofibril, sarcomere, Z line. Cytoplasm Cell membrane, sarcolemma. Nucleus {ECO:0000250|UniProtKB:P31001}. Cell tip {ECO:0000250|UniProtKB:P31001}. Nucleus envelope {ECO:0000250|UniProtKB:P31001}. Note=Localizes in the intercalated disks which occur at the Z line of cardiomyocytes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

DES / Desmin Antibody (clone D9) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DES / Desmin Antibody (clone D9) - Images



Anti-DES / Desmin antibody IHC of human heart.

DES / Desmin Antibody (clone D9) - 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 D9) - 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).