

**DES / Desmin Antibody (Ile448)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS15959****Specification**

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**DES / Desmin Antibody (Ile448) - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P17661</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54kDa KDa

**DES / Desmin Antibody (Ile448) - Additional Information****Gene ID** 1674**Other Names**  
Desmin, DES**Target/Specificity**  
Human Desmin**Reconstitution & Storage**

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

**Precautions**

DES / Desmin Antibody (Ile448) is for research use only and not for use in diagnostic or therapeutic procedures.

**DES / Desmin Antibody (Ile448) - 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:<a href="http://www.uniprot.org/citations/25358400" target="\_blank">25358400</a>). 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:<a href="http://www.uniprot.org/citations/24200904" target="\_blank">24200904</a>, PubMed:<a href="http://www.uniprot.org/citations/25394388" target="\_blank">25394388</a>, PubMed:<a href="http://www.uniprot.org/citations/26724190" target="\_blank">26724190</a>). May act as a sarcomeric microtubule-anchoring protein: specifically associates with dephosphorylated 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

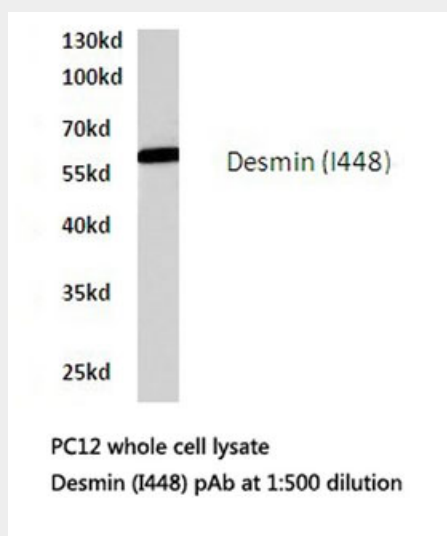
50 µl

#### DES / Desmin Antibody (Ile448) - Protocols

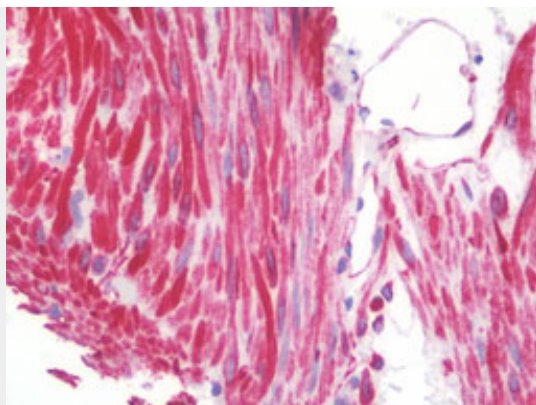
Provided below are standard protocols that you may find useful for product applications.

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

#### DES / Desmin Antibody (Ile448) - Images



Western blot of Desmin (I448) pAb in extracts from PC12 cells.



Anti-DES / Desmin antibody IHC staining of human small intestine.

#### **DES / Desmin Antibody (Ile448) - 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 (Ile448) - 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).