

**Anti-Desmin Picoband Antibody**  
Catalog # ABO11812**Specification****Anti-Desmin Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P17661</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Desmin(DES) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Desmin Picoband Antibody - Additional Information**

**Gene ID** 1674

**Other Names**

Desmin, DES

**Calculated MW**

53536 MW KDa

**Application Details**

Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Mouse, Rat,  
-<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By  
Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm. Cell membrane, sarcolemma .

**Protein Name**

Desmin

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

E.coli-derived human Desmin recombinant protein (Position: M1-T304). Human Desmin shares 97% amino acid (aa) sequence identity with both mouse and rat Desmin.

**Purification**

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins

### Storage

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

### Sequence Similarities

Belongs to the intermediate filament family.

## Anti-Desmin Picoband 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:<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}

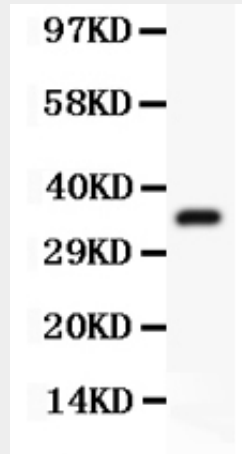
## Anti-Desmin Picoband Antibody - Protocols

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

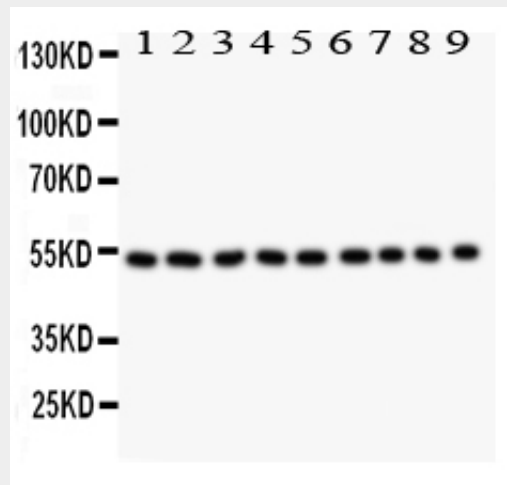
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

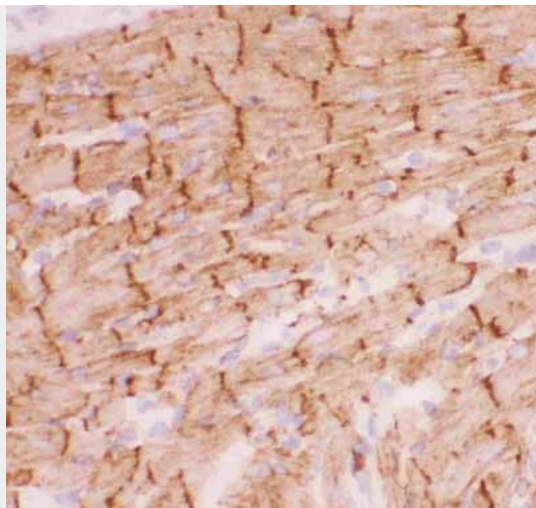
### Anti-Desmin Picoband Antibody - Images



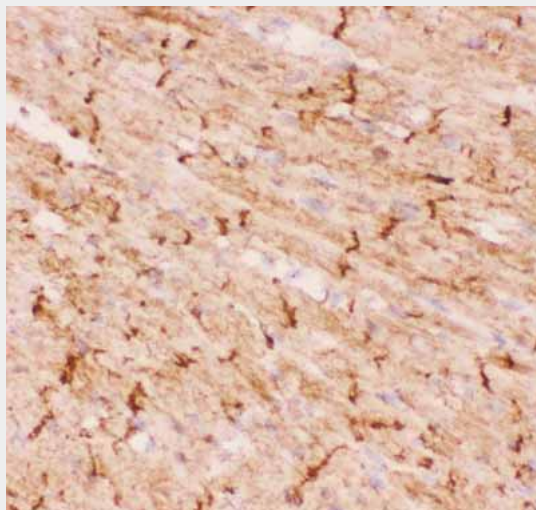
Anti-Desmin Picoband antibody, ABO11812-1.jpg All lanes: Anti Desmin (ABO11812) at 0.5ug/ml WB: Recombinant Human Desmin Protein 0.5ng Predicted bind size: 36KD Observed bind size: 36KD



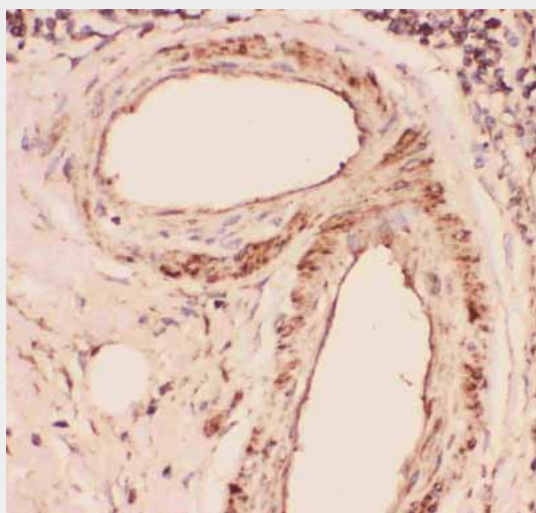
Anti-Desmin Picoband antibody, ABO11812-2.jpg All lanes: Anti Desmin (ABO11812) at 0.5ug/ml Lane 1: Rat Skeletal Muscle Tissue Lysate at 50ug Lane 2: Rat Cardiac Muscle Tissue Lysate at 50ug Lane 3: Mouse Skeletal Muscle Tissue Lysate at 50ug Lane 4: Mouse Cardiac Muscle Tissue Lysate at 50ug Lane 5: HELA Whole Cell Lysate at 40ug Lane 6: HT1080 Whole Cell Lysate at 40ug Lane 7: COLO320 Whole Cell Lysate at 40ug Lane 8: HEPA Whole Cell Lysate at 40ug Lane 9: NIH3T3 Whole Cell Lysate at 40ug Predicted bind size: 53KD Observed bind size: 53KD



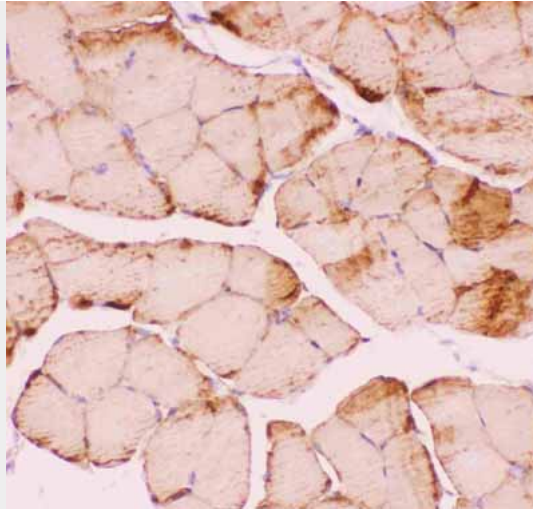
Anti-Desmin Picoband antibody, ABO11812-3.JPGIHC(F): Rat Cardiac Muscle Tissue



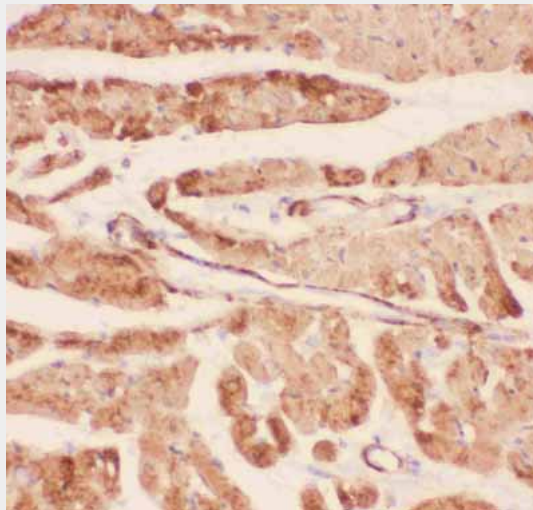
Anti-Desmin Picoband antibody, ABO11812-4.JPGIHC(F): Mouse Cardiac Muscle Tissue



Anti-Desmin Picoband antibody, ABO11812-5.JPGIHC(P): Human Intestinal Cancer Tissue



Anti-Desmin Picoband antibody, ABO11812-6.JPGIHC(P): Mouse Skeletal Muscle Tissue



Anti-Desmin Picoband antibody, ABO11812-7.JPGIHC(P): Rat Cardiac Muscle Tissue

### **Anti-Desmin Picoband Antibody - Background**

DES, also called desmin, is a protein that in humans is encoded by the DES gene, and this gene is mapped to 2q35. DES is the muscle-specific member of the intermediate filament (IF) protein family. It is one of the earliest myogenic markers, both in heart and somites, and is expressed in satellite stem cells and replicating myoblasts. DES is very important in muscle cell architecture and structure since it connects many components of the cytoplasm. It may also play an important role in mitochondria function. What's more, DES provides attachments between the terminal Z disc and membrane-associated proteins to form a force-transmitting system that parallels the thin filaments at myotendinous junctions.