10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Desmin Picoband Antibody

Catalog # ABO11812

Specification

Anti-Desmin Picoband Antibody - Product Information

Application	**WB, IHC-P, IHC-F**
Primary Accession	P17661
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,
-
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cytoplasm. Cell membrane, sarcolemma .

Protein Name
Desmin

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

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: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}

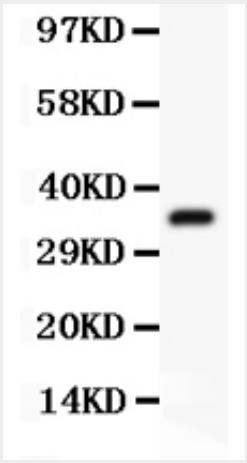
Anti-Desmin Picoband Antibody - Protocols

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

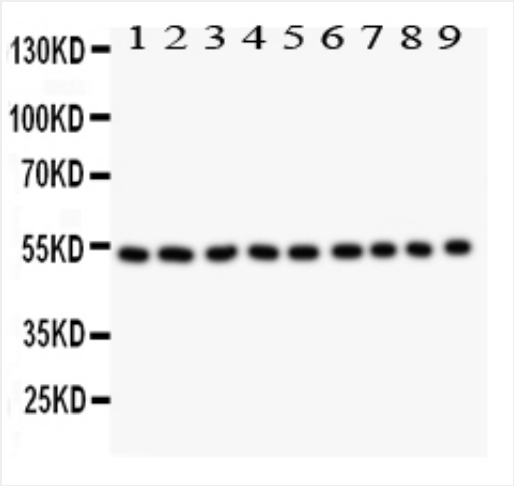
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Desmin Picoband Antibody - Images



Anti-Desmin Picoband antibody, ABO11812-1.jpgAll lanes: Anti Desmin (ABO11812) at 0.5ug/mlWB: Recombinant Human Desmin Protein 0.5ngPredicted bind size: 36KDObserved bind size: 36KD



Anti-Desmin Picoband antibody, ABO11812-2.jpgAll lanes: Anti Desmin (ABO11812) at 0.5ug/mlLane 1: Rat Skeletal Muscle Tissue Lysate at 50ugLane 2: Rat Cardiac MuscleTissue Lysate at 50ugLane 3: Mouse Skeletal Muscle Tissue Lysate at 50ugLane 4: Mouse Cardiac MuscleTissue Lysate at 50ugLane 5: HELA Whole Cell Lysate at 40ugLane 6: HT1080 Whole Cell Lysate at 40ugLane 7: COLO320 Whole Cell Lysate at 40ugLane 8: HEPA Whole Cell Lysate at 40ugLane 9: NIH3T3 Whole Cell Lysate at 40ugPredicted bind size: 53KDObserved bind size: 53KD

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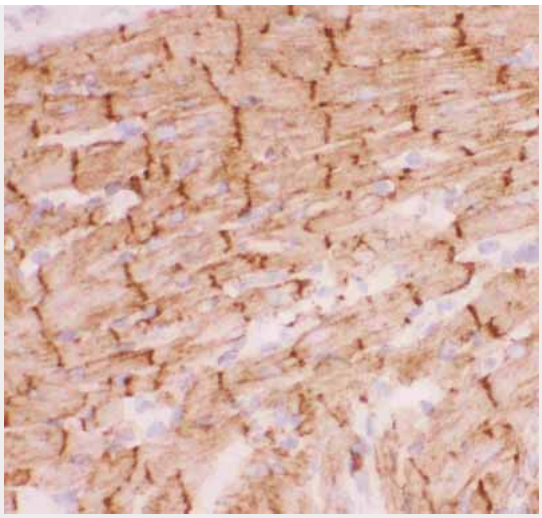
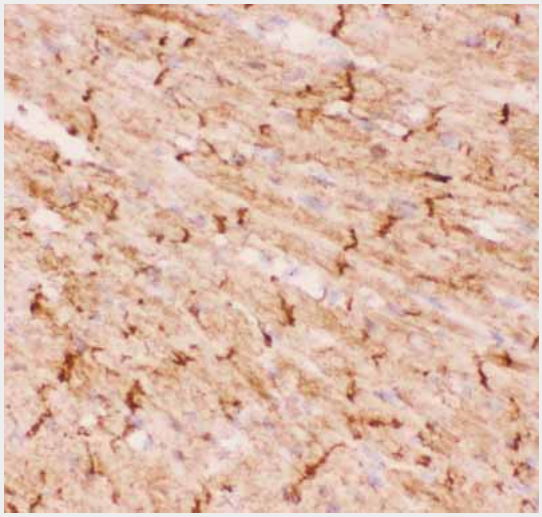
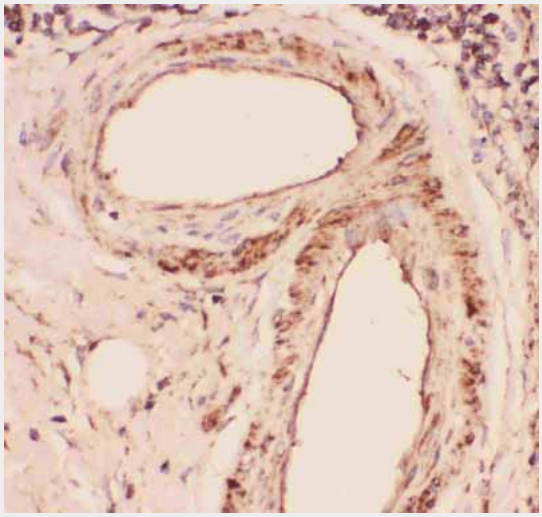


Anti-Desmin Picoband antibody, ABO11812-3.JPGIHC(F): Rat Cardiac Muscle Tissue



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



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

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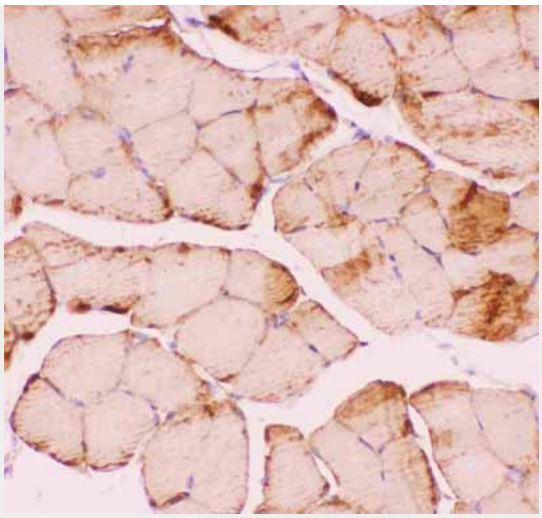
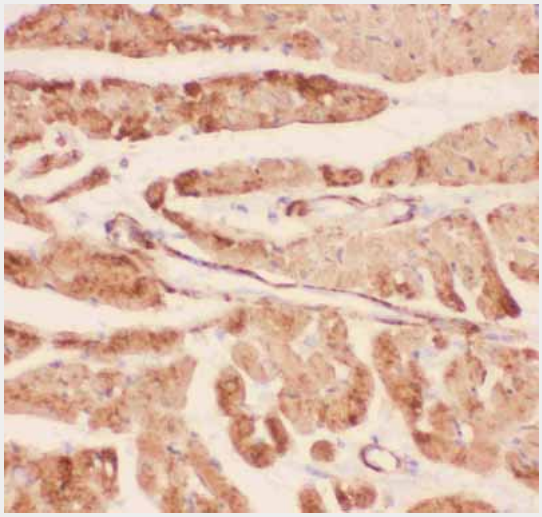


Anti-Desmin Picoband antibody, ABO11812-6.JPGIHC(P): Mouse Skeletal Muscle Tissue



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 be also play an important role in mitochondria function. Whatâ€™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.