

# Phospho-Desmin(T16) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3533a

## Product Information

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<b>Application</b>	WB, DB, E
<b>Primary Accession</b>	<a href="#">P17661</a>
<b>Other Accession</b>	<a href="#">P48675</a> , <a href="#">P02540</a> , <a href="#">P31001</a> , <a href="#">O62654</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Bovine, Mouse, Pig, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB15196
<b>Calculated MW</b>	53536

## Additional Information

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<b>Gene ID</b>	1674
<b>Other Names</b>	Desmin, DES
<b>Target/Specificity</b>	This Desmin Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T16 of human Desmin.
<b>Dilution</b>	WB~~1:1000 DB~~1:500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	Phospho-Desmin(T16) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	DES
<b>Function</b>	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 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}

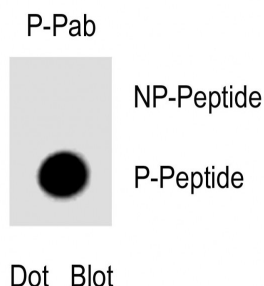
## Background

Desmin is a muscle-specific class III intermediate filament. Homopolymers of this protein form a stable intracytoplasmic filamentous network connecting myofibrils to each other and to the plasma membrane. Mutations in the gene encoding desmin are associated with desmin-related myopathy, a familial cardiac and skeletal myopathy (CSM), and with distal myopathies.

## References

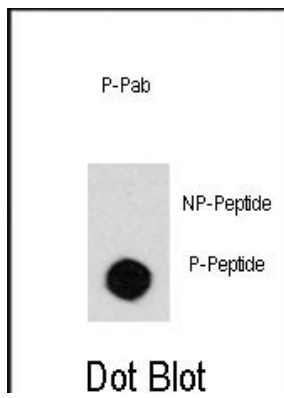
Ariza,A., Hum. Pathol. 26 (9), 1032-1037 (1995)  
Li,Z.L., Gene 78 (2), 243-254 (1989)

## Images



Dot blot analysis of Phospho-Desmin(T16)  
Phospho-specific Pab on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibodies working concentration was 0.5ug per ml

Dot blot analysis of anti-Phospho-Desmin-pT16 Antibody (Cat.#AP3533a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were



adsorbed. Antibody working concentrations are 0.5ug per ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.