

**Desmin Antibody (T16) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP2751a****Specification**

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**Desmin Antibody (T16) Blocking Peptide - Product Information**Primary Accession [P17661](#)**Desmin Antibody (T16) Blocking Peptide - Additional Information****Gene ID** 1674**Other Names**  
Desmin, DES**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP2751a](/products/AP2751a) was selected from the T16 region of human Desmin. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Desmin Antibody (T16) Blocking Peptide - 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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/24200904), PubMed: [25394388](http://www.uniprot.org/citations/25394388), PubMed: [26724190](http://www.uniprot.org/citations/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}

#### **Desmin Antibody (T16) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **Desmin Antibody (T16) Blocking Peptide - Images**

#### **Desmin Antibody (T16) Blocking Peptide - 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.

#### **Desmin Antibody (T16) Blocking Peptide - References**

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