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KD-Validated Anti-Desmin Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1308

Specification

KD-Validated Anti-Desmin Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P17661
Reactivity	**Rat, Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 54 kDa , observed, 53 kDa KDa**
Gene Name	**DES**
Aliases	**DES; Desmin; CSM1; CSM2; Intermediate Filament Protein; Cardiomyopathy, Dilated 1I; LGMD2R; CMD1I; Cardiomyopathy, Dilated 1F (Autosomal Dominant); Epididymis Secretory Sperm Binding Protein; LGMD1D; LGMD1E; CDCD3**
Immunogen	**A synthesized peptide derived from human Desmin**

KD-Validated Anti-Desmin Rabbit Monoclonal Antibody - Additional Information

Gene ID	**1674**

Other Names
Desmin, DES

KD-Validated Anti-Desmin Rabbit Monoclonal 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).

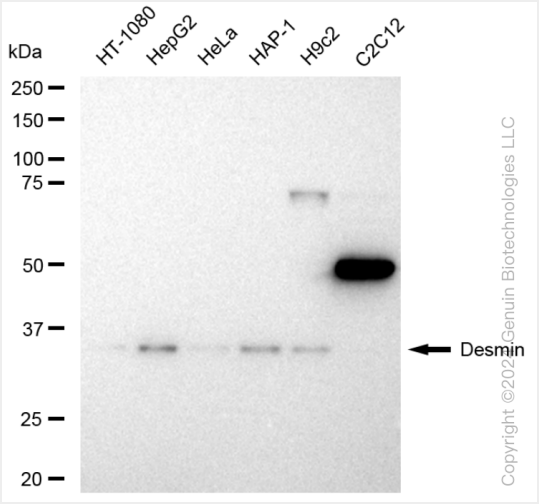
Cellular Location
Cytoplasm, myofibril, sarcomere, Z line. Cytoplasm Cell membrane, sarcolemma. Nucleus {ECO:0000250|UniProtKB:P31001}. Cell tip {ECO:0000250|UniProtKB:P31001}. Nucleus envelope {ECO:0000250|UniProtKB:P31001}. Note=Localizes in the intercalated disks which occur at the Z line of cardiomyocytes (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}

KD-Validated Anti-Desmin Rabbit Monoclonal 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

KD-Validated Anti-Desmin Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-Desmin antibody (Cat#AGI1308). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Desmin antibody (Cat#AGI1308, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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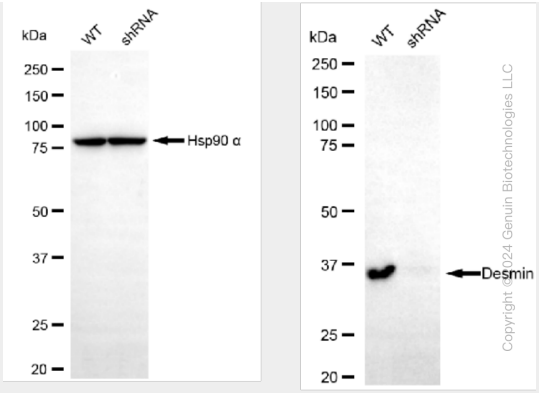
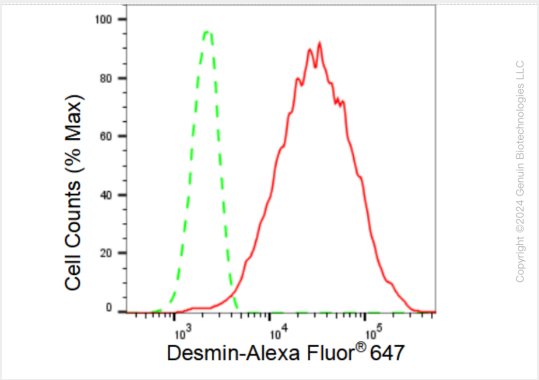
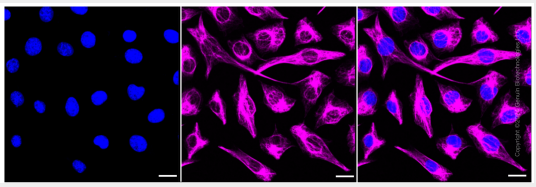


Western blotting analysis using anti-Desmin antibody (Cat#AGI1308). Desmin expression in wild type (WT) and Desmin shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Desmin antibody (Cat#AGI1308, 1:20,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Desmin expression in C2C12 cells using Desmin antibody (Cat#AGI1308, 1:2,000). Green, isotype control; red, Desmin.



Immunocytochemical staining of C2C12 cells with Desmin antibody (Cat#AGI1308, 1:1,000). Nuclei were stained blue with DAPI; Desmin was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20 µm.