

KD-Validated Anti-Desmin Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1308

Product Information

Application	WB, FC, ICC
Primary Accession	P17661
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 3120
Calculated MW	53536
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

Additional Information

Gene ID	1674
Other Names	Desmin, DES

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 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}

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