

Desmin (10H7D2): sc-65983

BACKGROUND

Cytoskeletal intermediate filaments (IFs) constitute a diverse group of proteins that are expressed in a highly tissue-specific manner. IFs are constructed from two-chain α -helical coiled-coil molecules arranged on an imperfect helical lattice and have been widely used as markers for distinguishing individual cell types within a tissue and identifying the origins of metastatic tumors. Vimentin is an IF general marker of cells originating in the mesenchyme. Vimentin and Desmin, a related class III IF, are both expressed during skeletal muscle development. Desmin, a 469 amino acid protein found near the Z line in sarcomeres, is expressed more frequently in adult differentiated state tissues. Desmin makes up attachments between the terminal Z-disc and membrane-associated proteins to form a force-transmitting system. Mutations in the gene encoding for Desmin are associated with adult-onset skeletal myopathy, sporadic disease and mild cardiac involvement.

REFERENCES

- Li, Z.L., et al. 1989. Human Desmin-coding gene: complete nucleotide sequence, characterization and regulation of expression during myogenesis and development. *Gene* 78: 243-254.
- Tidball, J.G. 1992. Desmin at myotendinous junctions. *Exp. Cell Res.* 199: 206-212.
- Stewart, M. 1993. Intermediate filament structure and assembly. *Curr. Opin. Cell Biol.* 5: 3-11.

CHROMOSOMAL LOCATION

Genetic locus: DES (human) mapping to 2q35; Des (mouse) mapping to 1 C4.

SOURCE

Desmin (10H7D2) is a mouse monoclonal antibody raised against purified truncated recombinant Desmin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Desmin (10H7D2) is recommended for detection of Desmin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Desmin siRNA (h): sc-29294, Desmin siRNA (m): sc-29295, Desmin shRNA Plasmid (h): sc-29294-SH, Desmin shRNA Plasmid (m): sc-29295-SH, Desmin shRNA (h) Lentiviral Particles: sc-29294-V and Desmin shRNA (m) Lentiviral Particles: sc-29295-V.

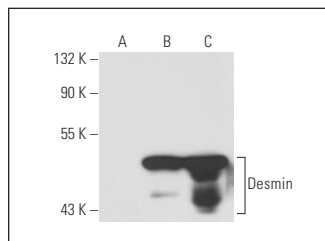
Molecular Weight of Desmin: 53 kDa.

Positive Controls: Desmin (m): 293T Lysate: sc-119754, Sol8 cell lysate: sc-2249 or SJRH30 cell lysate: sc-2287.

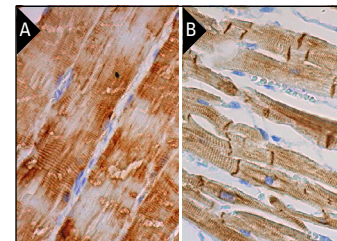
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Desmin (10H7D2): sc-65983. Western blot analysis of Desmin expression in non-transfected 293T: sc-117752 (A), mouse Desmin transfected 293T: sc-119754 (B) and SJRH30 (C) whole cell lysates.



Desmin (10H7D2): sc-65983. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing intercalated disc and cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

- Huang, G., et al. 2017. Notoginsenoside R1 attenuates glucose-induced podocyte injury via the inhibition of apoptosis and the activation of autophagy through the PI3K/Akt/mTOR signaling pathway. *Int. J. Mol. Med.* 39: 559-568.
- He, H., et al. 2019. Intrauterine programming of the glucocorticoid-Insulin-like growth factor 1 (GC-IGF1) axis mediates glomerulosclerosis in female adult offspring rats induced by prenatal ethanol exposure. *Toxicol. Lett.* 311: 17-26.
- He, M., et al. 2019. MiR-320a induces diabetic nephropathy via inhibiting MafB. *Aging* 11: 3055-3079.
- Corsello, T., et al. 2019. Wharton's jelly mesenchymal stromal cells from human umbilical cord: a close-up on immunomodulatory molecules featured *in situ* and *in vitro*. *Stem Cell Rev Rep.* 15: 900-918.
- Chen, H., et al. 2020. Prenatal ethanol exposure increased the susceptibility of adult offspring rats to glomerulosclerosis. *Toxicol. Lett.* 321: 44-53.
- Graziano, A.C.E., et al. 2021. Adaption of lung fibroblasts to fluoro-edenite fibers: evaluation of molecular and physiological dynamics. *Cell. Physiol. Biochem.* 55: 327-343.
- Zhao, X., et al. 2022. Prenatal caffeine exposure induced renal developmental toxicity and transgenerational effect in rat offspring. *Food Chem. Toxicol.* 165: 113082.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.