SANTA CRUZ BIOTECHNOLOGY, INC.

Desmin (4A45): sc-70961

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. 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.
2. Tidball, J.G., et al. 1992. Desmin at myotendinous junctions. Exp. Cell Res. 199: 206-212.

CHROMOSOMAL LOCATION

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

SOURCE

Desmin (4A45) is a mouse monoclonal antibody raised against Desmin isolated from leiomyoma cells of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Desmin (4A45) 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 µg per 100-500 µg 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.

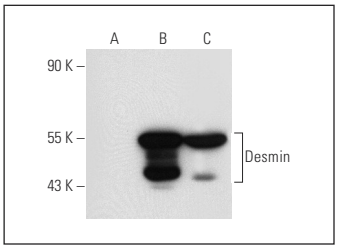
Molecular Weight of Desmin: 53 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, DESMIN (m): 293T Lysate: sc-119754 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 (4A45): sc-70961. 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.

SELECT PRODUCT CITATIONS

1. Tang, D., et al. 2012. High expression of galectin-1 in pancreatic stellate cells plays a role in the development and maintenance of an immunosuppressive microenvironment in pancreatic cancer. Int. J. Cancer 130: 2337-2348.
2. Lokireddy, S., et al. 2012. Identification of atrogin-1-targeted proteins during the myostatin-induced skeletal muscle wasting. Am. J. Physiol. Cell Physiol. 303: C512-C529.

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.