SANTA CRUZ BIOTECHNOLOGY, INC.

# Desmin (A-18): sc-34200

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.
3. Stewart, M. 1993. Intermediate filament structure and assembly. Curr. Opin. Cell Biol. 5: 3-11.
4. Gereben, B., et al. 1995. Species-specificity of glial vimentin as revealed by immunocytochemical studies with the Vim 3B4 and V9 monoclonal antibodies. Neurobiology 3: 151-164.
5. Andreoli, J.M. and Trevor, K.T. 1995. Structural and biological consequences of increased vimentin expression in simple epithelial cell types. Cell Motil. Cytoskel. 32: 10-25.
6. Seshadri, R., et al. 1996. Vimentin expression is not associated with poor prognosis in breast cancer. Int. J. Cancer 67: 353-356.


## CHROMOSOMAL LOCATION

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

## SOURCE

Desmin (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Desmin of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Desmin (A-18) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

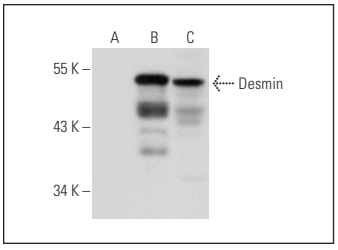
Desmin (A-18) is also recommended for detection of Desmin in additional species, including equine, canine, bovine and porcine.

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.

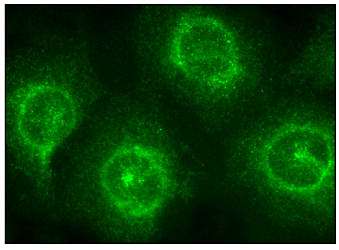
Molecular Weight of Desmin: 53 kDa.

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

## DATA




Desmin (A-18): sc-34200. 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 (A-18): sc-34200. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Nagasu, H., et al. 2011. Comparison of combination therapy of olmesartan plus azelnidipine or hydrochlorothiazide on renal and vascular damage in SHR/NDmcr-cp rats. Kidney Blood Press. Res. 34: 87-96.


## RESEARCH USE

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

## PROTOCOLS

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