**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 attachements 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**


**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 µg IgG1 in 1.0 ml 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 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: Desmin (m): 293T Lysate: sc-119754, Sol8 cell lysate: sc-2249 or SJRH30 cell lysate: sc-2287.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000). Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2287 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:50-1:500) and immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

**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) and human heart muscle tissue showing intercalated disc and cytoplasmic staining of myocytes (B).

**STORAGE**

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

**RESEARCH USE**

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