

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects recombinant human Desmin protein in Direct ELISA.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 1089115
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> derived recombinant human Desmin Accession # P17661
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

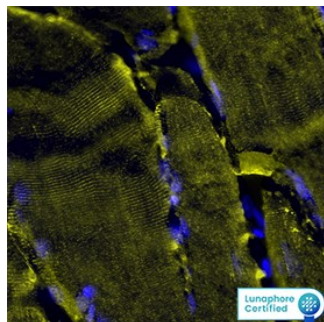
**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	RD human rhabdomyosarcoma cell line, C2C12 mouse myoblast cell line, and rat heart tissue
<b>Immunocytochemistry</b>	3-25 µg/mL	Detection of Desmin in RD cells and A172 cells
<b>Multiplex Immunofluorescence</b>	1 µg/mL	Immersion fixed paraffin-embedded sections of human Skeletal Muscle
<b>Immunohistochemistry</b>	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human Heart and human Skeletal Muscle
<b>Simple Western</b>	20 µg/mL	RD human rhabdomyosarcoma cell line

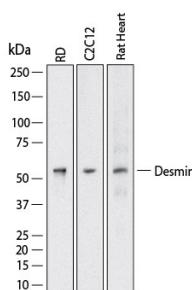
**DATA**

**Multiplex Immunofluorescence**



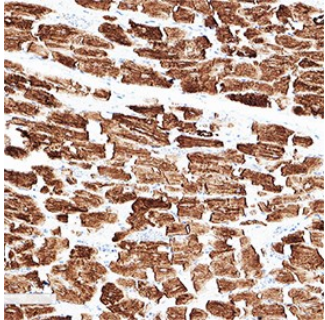
**Detection of Desmin in Human Skeletal Muscle via seqIF™ staining on COMET™** Desmin Antibody was detected in immersion fixed paraffin-embedded sections of human Skeletal Muscle using Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # Catalog # MAB11607) at 1µg/mL at 37 ° Celsius for 4 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9; Epredia Catalog # TA-999-DHBH). Tissue was stained using the Alexa Fluor™ 555 Goat anti-Mouse IgG Secondary Antibody at 1:100 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR555MS) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the cytoplasm and membrane. Protocol available in COMET™ Panel Builder.

**Western Blot**



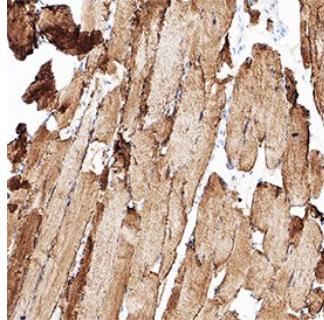
**Detection of Human, Mouse and Rat Desmin by Western Blot.** Western Blot shows lysates of RD human rhabdomyosarcoma cell line, C2C12 mouse myoblast cell line and rat heart tissue. PVDF membrane was probed with 1 µg/ml of Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # MAB11607) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Desmin at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

**Immunohistochemistry**



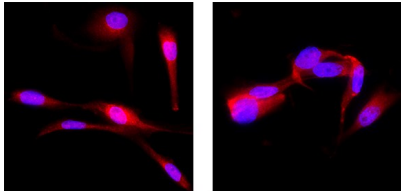
**Detection of Desmin in human heart** Desmin was detected in immersion fixed paraffin-embedded sections of heart using Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # MAB11607) at 5 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm of cardiomyocytes. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

**Immunohistochemistry**



**Detection of Desmin in human skeletal muscle** Desmin was detected in immersion fixed paraffin-embedded sections of human skeletal muscle using Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # MAB11607) at 5 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

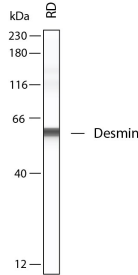
**Immunocytochemistry**




**Detection of Desmin in RD cells and A172 cells.** Desmin was detected in immersion fixed RD cells (Positive) and A172 human glioblastoma cell line (Positive) using Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # mab11607) at 8 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to the cytoplasm and nucleus. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

RD (Positive)      A172 (Positive)

**Simple Western**



**Detection of Human Desmin by Simple Western™.** Simple Western shows lysates of RD human rhabdomyosarcoma cell line, loaded at 0.5 mg/ml. A specific band was detected for Desmin at approximately 59 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human Desmin Monoclonal Antibody (Catalog # MAB11607). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
<b>Shipping</b>	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Desmin is a 53 kDa, muscle-specific molecule that belongs to the intermediate filament superfamily of cytoskeletal proteins. Cytoplasmic Desmin homopolymers form stable filamentous networks that stabilize lateral alignments of myofibrils. Human Desmin is 470 amino acid peptide. It contains an N-terminal head segment (aa 1-84), multiple coiled regions (aa 109-412) and a tail region (aa 413-470). Single amino acid substitutions and three-amino acid deletions are associated with cardio-skeletal myopathies. Most mutations affect filament assembly. Desmin is a highly conserved protein. Over the region used as immunogen, human Desmin is 99% identical to the corresponding mouse, canine and porcine protein sequences.