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Product Information

Anti-Desmin antibody, Mouse monoclonal clone DE-U-10, purified from hybridoma cell culture

Product Number SAB4200707

Product Description

Anti-Desmin antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma DE-U-10 produced by the fusion of mouse myeloma cells and splenocytes from an immunized BALB/C mouse. Desmin purified from pig stomach was used as the immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Desmin recognizes human, ^{1,3} chicken, rat, ¹ hamster, ¹ mouse, ^{2,3} bovine, ⁴ rabbit, ⁵ porcine, ⁶ sheep, ⁷ goat, ⁸ and toad ¹ Desmin. The antibody is recommended for use in several immunological techniques including Immunoblotting (~55 kDa), Immunofluorescence, ² Immunohistochemistry ¹ and Microarray. ¹⁻³ Detection of the Desmin band by Immunoblotting is specifically inhibited by the immunogen.

Desmin, a major intermediate filament protein in skeletal, cardiac and smooth muscle cells, is a central component of the filamentous extrasarcomeric cytoskeleton, which links neighboring myofibrils and connects the myofibrillar apparatus with the subsarcolemmal cytoskeleton, myonuclei and mitochondria.³ Mutations is the Desmin gene (known as desminopathy or DRM) are associated with several human diseases such as atrophy and facial muscle weakness, cardiomyopathy, cardiac arrhythmias and restrictive heart failure and are characterized by intracellular Desmin aggregates.⁹⁻¹⁰

Anti-Desmin antibodies can be implemented for cancer research and diagnostics since elevated levels of Desmin characterize several types of muscle tissue tumors, such as leiomyomas and rhabdomyosarcomas. The antibody may also be used for meat research mesurements. ^{4,7}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

 $\frac{Immunoblotting:}{0.5\text{-}1} \text{ } \mu\text{g/mL} \text{ is recommended using whole extract of mouse myoblast C2C12 cells.}$

 $\frac{Immunofluorescence}{2-5~\mu g/mL} \ is \ recommended \ using \ mouse \ myoblast \ C2C12 \ cells.$

 $\frac{Immunohistochemistry:}{2.5-5~\mu g/mL} \ is \ recommended \ using \ heat-retrieved formalin-fixed, \ paraffin-embedded \ human \ appendix.$

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

- 1. Debus E., et al., *EMBO J.*, **2**, 2305-12 (1983).
- 2. Toth A., et al., *PLoS One*, **10**, e0123583 (2015).
- 3. Clemen CS., et al., *Acta Neuropathol*, **129**, 297–315 (2015).
- Mohrhauser DA., et al., *J Anim Sci.*, 89, 798-808 (2011).
- Sultan KR., et al., Am J Physiol Cell Physiol., 280, C239-47 (2001).
- 6. Kalbe C., et al., *Histochem Cell Biol.*, **127**, 95-107 (2007).

- 7. Kim YH., et al., *Meat Sci.*, **95**, 412-8 (2013).
- 8. Patel AK., et al., *In Vitro Cell Dev Biol Anim.*, **50**, 587-96 (2014).
- 9. Sequeira V., et al., *Biochim Biophys Acta.*, **1838**, 700–22 (2014).
- 10. Bar H., et al., *J Struct Biol.*, **148**, 137-52 (2004).

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