PRODUCT INFORMATION

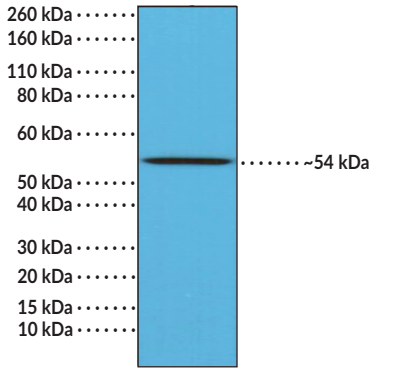
Desmin Monoclonal Antibody (Clone RM234)

Item No. 32194

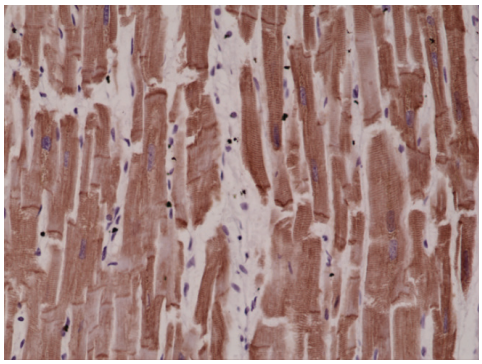
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Immunogen:	Peptide corresponding to human desmin
Cross Reactivity:	(+) Desmin
Species Reactivity:	(+) Human, mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM234
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:1,000-1:4,000 and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of mouse heart tissue lysates using Desmin Monoclonal Antibody (Clone RM234) at a 1:1,000 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human heart tissue using Desmin Monoclonal Antibody (Clone RM234) at a 1:4,000 dilution.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

Desmin is a type III muscle-specific intermediate filament protein.[1] It is composed of a central rod containing four α-helical domains, which are important for self-assembly, and non-helical head and tail domains at the N- and C-termini, respectively. It is expressed specifically in muscle cells beginning in early development and in skeletal and cardiac muscle progenitor cells in the adult. Desmin associates with the cardiac and skeletal muscle sarcolemma at costameres and is involved in sarcolemma organization. In cardiac muscle, it is found at the desmosomes of intercalated disks. It also associates with mitochondria, and desmin-deficient mice have mitochondrial abnormalities, which lead to heart failure. Desmin self-polymerizes but can also form heteropolymers with other type III or -IV intermediate filament proteins.[2] Mutations in *DES*, the gene encoding desmin, disrupt desmin self-assembly, lead to accumulation of cytoskeletal protein aggregates, and are associated with desmin-related myopathies that affect both skeletal and cardiac muscle.[3,4] Cayman's Desmin Monoclonal Antibody (Clone RM234) can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes desmin at approximately 54 kDa from human and mouse samples.

References

1. Hol, E.M. and Capetanaki, Y. Type III intermediate filaments desmin, glial fibrillary acidic protein (GFAP), vimentin, and peripherin. *Cold Spring Harb. Perspect. Biol.* **9(12)**, a021642 (2017).
2. Eriksson, J.E., Dechat, T., Grin, B., *et al*. Introducing intermediate filaments: From discovery to disease. *J. Clin. Invest.* **119(7)**, 1763-1771 (2009).
3. Goldfarb, L.G., Park, K.Y., Cervenáková, L., *et al*. Missense mutations in desmin associated with familial cardiac and skeletal myopathy. *Nat. Genet.* **19(4)**, 402-403 (1998).
4. Goldfarb, L.G., Vicart, P., Goebel, H.H., *et al*. Desmin myopathy. *Brain* **127(Pt 4)**, 723-734 (2004).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM