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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



Mouse anti Smoothelin

Catalogue number: **MUB1700P**

Clone	R4A
Isotype	IgG1
Product Type	Primary Antibodies
Units	0.1 mg
Host	Mouse
Species reactivity	Cat Chicken Dog Human Monkey Swine
Application	Immunoblotting Immunocytochemistry Immunohistochemistry (frozen) Immunohistochemistry (paraffin)

Distributors

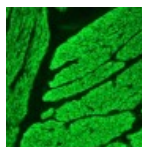
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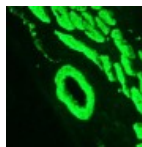
Background

Smoothelin is a constituent of the smooth muscle cell (SMC) cytoskeleton. Antibodies directed to smoothelin are useful tools to monitor SMC differentiation. Smoothelin is exclusively expressed in fully differentiated (contractile) SMCs. RNA and protein analyses revealed a broad species distribution of this protein. Smoothelin has also been detected in smooth-muscle neoplasms. Cells with SMC-like characteristics, such as myofibroblasts and myoepithelial cells, as well as skeletal and cardiac muscle do not contain smoothelin. Confocal scanning laser microscopy of tissue sections and cells in culture show a filamentous organization of smoothelin colocalizing with actin stress fibers. In immunoblots two molecular weight isoforms are detected i.e. a 59 kDa isoform specific for visceral SMC (smoothelin A), and an isoform with a molecular weight of approximately 100 kDa in vascular SMC (smoothelin B). Human smoothelin is encoded by a single copy gene which is located on chromosome 22.

1_MUB1700 Figure 1
Immunohistochemistry on frozen section of chicken gizzard striated muscle



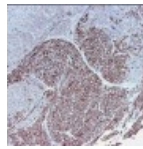
2_MUB1700 Figure 2
Immunohistochemistry on frozen section of chicken gizzard striated muscle



3_MUB1700 Figure 3
Immunohistochemistry on paraffin section of human smooth muscle

Source

R4A is a Mouse monoclonal IgG1 antibody derived by fusion of SP2/0-Ag14 Mouse myeloma cells with spleen cells from a BALB/c Mouse immunized with a cytoskeletal extract of Chicken gizzard.

**Product**

Each vial contains 100 ul 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

Applications

R4A is suitable for immunoblotting, immunocytochemistry on permeabilised cells, and immunohistochemistry on frozen and paraffin-embedded tissues. For staining paraffin-embedded tissues pretreatment in 10 mM citrate buffer (pH 6.0) and heating for 3 times 5 minutes in a microwave is required. Optimal antibody dilution should be determined by titration; recommended range is 1:100 – 1:200 for immunohistochemistry with avidin-biotinylated Horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:1000 for immunoblotting applications.

Specificity

R4A reacts with the 59 kDa and 100 kDa protein, corresponding to smoothelin A and B, respectively, which are exclusively found in smooth muscle cells.

Storage

Store at 4°C, or in small aliquots at -20°C.

References

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Caution

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals. This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water. This datasheet is as accurate as reasonably achievable, but Nordic-MUbio accepts no liability for any inaccuracies or omissions in this information.