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Nordic MUbio

Mouse anti actin alpha-smooth muscle

Catalogue number: **MUB0100P**

Clone	1A4
Isotype	IgG2a
Product Type	Primary Antibodies
Units	0.05 mg
Host	Mouse
Species reactivity	Chicken Goat Human Monkey Quail Rat Sheep Swine Xenopus
Application	Electron microscopy Immunoblotting Immunocytochemistry Immunohistochemistry (frozen) Immunohistochemistry (paraffin)

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Background

Among the six actin isoforms described in mammals, two are found in virtually all cells (β- and γ-cytoplasmic), two are detected in smooth muscle cells (α- and γ-smooth muscle) and two are present in striated muscles, one predominantly in skeletal (α-skeletal) and one in cardiac (α-cardiac) muscle cells. These actin isoforms differ slightly in their N-terminus, but the sequence of each of these actins is highly conserved in higher vertebRates. Alpha-smooth muscle actin is abundant in vascular and visceral smooth muscle cells. In addition, it has also been shown to appear in stress fibers of fibroblastic cells during pathological situations involving contractile phenomena such as wound healing and fibrocontractive diseases.

Source

α-SM1 (clone 1A4) is a Mouse monoclonal IgG2a antibody derived by fusion of Sp2/0 Mouse myeloma cells with spleen cells from a BALB/c Mouse immunized with a peptide comprising the first 10 amino acids of α-smooth muscle actin with an acetylated N-terminus coupled to keyhole limpet hemocyanin via the C-terminal

cysteine (Ac-EEEDSTALVC).

Product
Each vial contains 50 ul 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

Applications
α-SM1 is useful for immunohistochemistry on frozen and paraffin-embedded tissues, immunoblotting, immuno-electron microscopy and ELISA. Optimal antibody dilution should be determined by titration; recommended range is 1:100 – 1:250 for immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:500 for immunoblotting applications.

Cross Reactivity
The epitope recognized by α-SM1 is highly conserved. The antibody therefore cross-reacts with many species including protochordates, lower craniates and mammals.

Specificity
α-SM1 reacts exclusively with α-smooth muscle actin which is typical for vascular and visceral smooth muscle cells, but which is also present in myofibroblasts. The epitope that is recognized by α-SM1 is Ac-EEED.

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

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Caution

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