



Anti-Actin (Smooth Muscle Specific)

CATALOG No.: 29553

BACKGROUND:

Actins are highly conserved proteins expressed in all eucaryotic cells. Actin filaments form part of the cytoskeleton and play essential roles in regulating cell shape and movement. Six distinct actin isoforms have been identified in mammalian cells (1). Each is encoded by a separated gene and is expressed in a developmentally regulated and tissue-specific manner, α and β -cytoplasmic actins are expressed in a wide variety of cells; whereas, expression of α -skeletal, α -cardiac, α -vascular, and γ enteric actins are more restricted to specialized muscle cell type. Smooth muscle α -actin is of further interest because it is one of a few genes whose expression is relatively restricted to vascular smooth muscle cells (2). Further more, expression of smooth muscle α -actin is regulated by hormones (3), cell proliferation (4), and altered by pathological conditions including oncogenic transformation (5) and atherosclerosis (6, 7).

SOURCE:

Rabbit anti-Actin polyclonal antibody was raised against a synthetic peptide corresponding to N-terminus of actin from human smooth muscle. This sequence is identical in rat, mouse, chicken and bovine.

REACTIVITY:

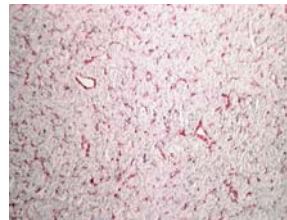
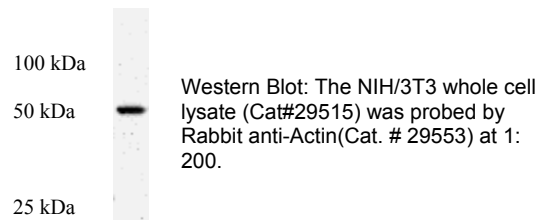
This epitope affinity purified rabbit polyclonal antibody is specific for actin. The antibodies were evaluated by Immunohistochemistry (IHC). This antibody stains smooth muscle cells in vessel walls, gut wall, and myometrium. Myoepithelial cells in breast and salivary gland are also stained. It reacts with tumors arising from smooth muscles and myoepithelial cells. The other actins, such as beta- and gamma-cytoplasmic, striated muscle, and myocardium are not stained by this antibody.

APPLICATION:

The following concentration ranges are recommended starting points for this product.

WB: 0.5 - 2 μ g/ml

IHC: 1:50-1:200 for 10 min



Human Leiomyoma stained with anti-Actin (Cat# 29553) by IHC Histain Kit-AEC. The formalin-fixed tissues was boiled in 10 mM citrate buffer, pH 6.0 for 10 min, followed by cooling @ RT for 20 min, then probed at a dilution 1:100 for 10 min at room temperature.

This product is for in vitro research purposes only.

STORAGE:

This polyclonal antibody is supplied as an epitope affinity purified rabbit IgG, 50 μ g in 250 μ l of phosphate buffered saline (pH 7.4) containing 0.02% sodium azide. Store at 2-8 $^{\circ}$ C for up to one year. Avoid repeated freezing and thawing.

REFERENCES:

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