

Smooth Muscle Actin (CGA7): sc-53015

BACKGROUND

All eukaryotic cells express Actin, which often constitutes as much as 50% of total cellular protein. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. While lower eukaryotes, such as yeast, have only one Actin gene, higher eukaryotes have several isoforms encoded by a family of genes. At least six types of Actin are present in mammalian tissues and fall into three classes. α Actin expression is limited to various types of muscle, whereas β and γ Actin are the principle constituents of filaments in other tissues. Members of the small GTPase family regulate the organization of the Actin cytoskeleton. Rho controls the assembly of Actin stress fibers and focal adhesion, Rac regulates Actin filament accumulation at the plasma membrane and Cdc42 stimulates formation of filopodia.

SOURCE

Smooth Muscle Actin (CGA7) is a mouse monoclonal antibody raised against full length gizzard Actin of chicken origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Smooth Muscle Actin (CGA7) is available conjugated to agarose (sc-53015 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53015 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53015 PE), fluorescein (sc-53015 FITC), Alexa Fluor[®] 488 (sc-53015 AF488), Alexa Fluor[®] 546 (sc-53015 AF546), Alexa Fluor[®] 594 (sc-53015 AF594) or Alexa Fluor[®] 647 (sc-53015 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53015 AF680) or Alexa Fluor[®] 790 (sc-53015 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Smooth Muscle Actin (CGA7) is recommended for detection of α and γ Actin isoforms of smooth muscle cells of mouse, rat, human and avian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with skeletal or cardiac cells.

Molecular Weight of Smooth Muscle Actin: 43 kDa.

Positive Controls: A-10 cell lysate: sc-3806, C2C12 whole cell lysate: sc-364188 or Sol8 cell lysate: sc-2249.

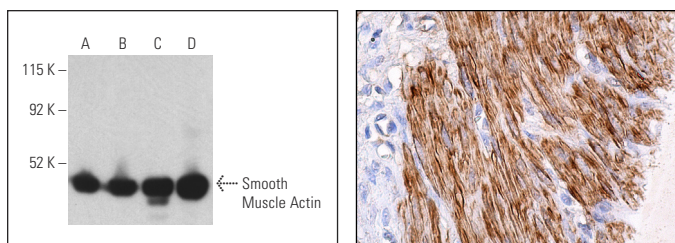
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Smooth Muscle Actin (CGA7): sc-53015. Western blot analysis of Smooth Muscle Actin expression in C2C12 (A), Sol8 (B) and A-10 (C) whole cell lysates and human smooth muscle tissue extract (D). Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

Smooth Muscle Actin (CGA7): sc-53015. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoskeletal staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

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PROTOCOLS

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