**Muscle Actin (HUC1-1): sc-53141**

**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-Actin and γ-Actin are the principal 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. Cdc42 stimulates formation of filopodia.

**SOURCE**

Muscle Actin (HUC1-1) is a mouse monoclonal antibody raised against vascular Muscle Actin of human origin.

**PRODUCT**

Each vial contains 200 μg IgGkappa light chain in 1 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Muscle Actin (HUC1-1) is available conjugated to agarose (sc-53141 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53141 HRP), 200 μg/ml, for WB, HCl/P and ELISA; to either phycoerythrin (sc-53141 PE), fluorescein (sc-53141 FITC), Alexa Fluor® 488 (sc-53141 AF488), Alexa Fluor® 546 (sc-53141 AF546), Alexa Fluor® 594 (sc-53141 AF594) or Alexa Fluor® 647 (sc-53141 AF647), 200 μg/ml, for WB (RGB), IF, IHQF and FCM; and to either Alexa Fluor® 680 (sc-53141 AF680) or Alexa Fluor® 790 (sc-53141 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Muscle Actin (HUC1-1) is recommended for detection of all vertebrate and avian Muscle Actins of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500). Non cross-reactive with cytoplasmic Actins.

Suitable for use as control antibody for Actin siRNA (h): sc-29191, Actin siRNA (m): sc-29192, Actin shRNA Plasmid (h): sc-29191-SH, Actin shRNA Plasmid (m): sc-29192-SH, Actin shRNA (h) Lentiviral Particles: sc-29191-V and Actin shRNA (m) Lentiviral Particles: sc-29192-V.

Molecular Weight of Muscle Actin: 43 kDa.

Positive Controls: A-673 cell lysate: sc-2414, BC3H1 cell lysate: sc-2299 or PC-12 cell lysate: sc-2250.

**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**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.