**Background**

Muscle specific RING finger protein (MuRF1) is a sarcomere-associated protein that is upregulated by conditions that provoke atrophy. Pharmacological or genetic inhibition of the IKKβ/NFκB/MuRF1 pathway reverses muscle atrophy, which presents MuRF as a target for clinical intervention. MuRF1 is a key regulator of the PKC-dependent hypertrophic response and can blunt cardiomyocyte hypertrophy, which may have important implications in the pathophysiology of clinical cardiac hypertrophy. MuRF1 directly associates with Titin kinase and influences microtubule-dependent signaling pathways in striated muscle and iris. MuRF1 upregulation is an indicator for skeletal muscle atrophy mechanisms that utilize ubiquitin-dependent proteolysis. MuRF1 transcript levels are high in situations where there is an overabundance of reactive oxygen species, such as cancer, AIDS and sepsis.

**Chromosomal Location**

Genetic locus: TRIM63 (human) mapping to 1p36.11; Trim63 (mouse) mapping to 4 D3.

**Source**

MuRF1 (C-11) is a mouse monoclonal antibody raised against amino acids 184-328 mapping near the N-terminus of MuRF1 of human origin.

**Product**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MuRF1 (C-11) is available conjugated to agarose (sc-398608 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398608 HRP), 200 µg/ml, for WB, (HCP) and ELISA; to either phycocerythrin (sc-398608 PE), fluorescein (sc-398608 FITC), Alexa Fluor® 488 (sc-398608 AF488), Alexa Fluor® 546 (sc-398608 AF546), Alexa Fluor® 594 (sc-398608 AF594) or Alexa Fluor® 647 (sc-398608 AF647), 200 µg/ml, for WB (RGB), IF, HCP and FCM; and to either Alexa Fluor® 680 (sc-398608 AF680) or Alexa Fluor® 790 (sc-398608 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**Applications**

MuRF1 (C-11) is recommended for detection of MuRF1 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

Suitable for use as control antibody for MuRF1 siRNA (h): sc-43951, MuRF1 siRNA (m): sc-149717, MuRF1 siRNA (r): sc-156173, MuRF1 shRNA Plasmid (h): sc-43951-SH, MuRF1 shRNA Plasmid (m): sc-149717-SH, MuRF1 shRNA (r) Lentiviral Particles: sc-43951-V, MuRF1 shRNA (m) Lentiviral Particles: sc-149717-V and MuRF1 shRNA (r) Lentiviral Particles: sc-156173-V.

Molecular Weight of MuRF1: 40 kDa.

Positive Controls: MuRF1 (h): 293T Lysate: sc-369006.

**Storage**

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

**Data**

MuRF1 (C-11): sc-398608. Western blot analysis of MuRF1 expression in non-transfected: sc-117752(A) and human MuRF1 transfected: sc-398608 (B) 293T whole cell lysates and mouse heart (C) and mouse skeletal muscle (D) tissue extracts.

MuRF1 (C-11): sc-398608. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and faint cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

**Select Product Citations**


**Research Use**

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

**Protocols**

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

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