

# Anti-MuRF1 (C-terminal region) Antibody

Catalog # AN1842

### **Product Information**

ApplicationWB, ICCPrimary AccessionQ969Q1HostRabbit

**Clonality** Rabbit Polyclonal

Isotype IgG
Calculated MW 40248

### **Additional Information**

**Gene ID** 84676

Other Names Tripartite motif 63, TRIM63, SMRZ, IRF, RNF28, Muscle RING finger, MURF-1

**Target/Specificity** Muscle proteolysis is regulated by the ATP-dependent ubiquitin–proteasome

system. This system involves ubiquitination of specific proteins, leading to recognition and degradation by the 26S proteasome complex. Ubiquitination requires interactions with ubiquitin related proteins, ubiquitin-activating (E1), ubiquitin-conjugating (E2) and ubiquitin-ligating enzymes (E3) known as ligases. Two muscle specific ubiquitin ligases have been identified, muscle ring finger 1 (MuRF-1) and Atrogin 1. Both ligases are regulated by the Akt1/FOXO1 signaling pathway, and both proteins have been shown to be upregulated prior to the onset of atrophy in multiple models of muscle wasting, including disuse and cachexia. MuRF1 is also known as TRIM63, SMRZ, and RNF28, and its expression is upregulated after TNFα treatment in C2C12 cells and muscle tissue, while localization of MuRF1 protein has been

observed in the cytoplasm and nucleus of cells.

**Dilution** WB~~1:1000 ICC~~N/A

**Storage** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**Anti-MuRF1 (C-terminal region) Antibody is for research use only and not for

use in diagnostic or therapeutic procedures.

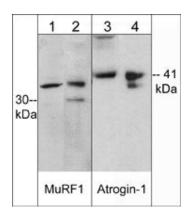
Shipping Blue Ice

## **Background**

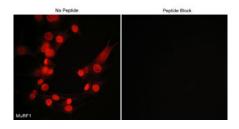
Muscle proteolysis is regulated by the ATP-dependent ubiquitin–proteasome system. This system involves ubiquitination of specific proteins, leading to recognition and degradation by the 26S proteasome complex. Ubiquitination requires interactions with ubiquitin related proteins, ubiquitin-activating (E1), ubiquitin-conjugating (E2) and ubiquitin-ligating enzymes (E3) known as ligases. Two muscle specific ubiquitin ligases have been identified, muscle ring finger 1 (MuRF-1) and Atrogin 1. Both ligases are

regulated by the Akt1/FOXO1 signaling pathway, and both proteins have been shown to be upregulated prior to the onset of atrophy in multiple models of muscle wasting, including disuse and cachexia. MuRF1 is also known as TRIM63, SMRZ, and RNF28, and its expression is upregulated after TNF $\alpha$  treatment in C2C12 cells and muscle tissue, while localization of MuRF1 protein has been observed in the cytoplasm and nucleus of cells.

### **Images**



Western blot analysis of mouse heart tissue (lanes 1 & 3) or C2C12 cells (lanes 2 & 4). The blot was probed with anti-MuRF1 (C-terminal region) (lanes 1 & 2) or anti-Atrogin-1 (lanes 3 & 4).



Immunocytochemical labeling of MuRF1 in mouse C2C12 cells. The cells were labeled with rabbit polyclonal MuRF1 antibody, then detected using appropriate secondary antibody conjugated to Cy3. The antibody was used in the absence (left) or presence (right) of blocking peptide (MX3405).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.