

MARCH1 (P-15): sc-104371

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). MARCH1 (membrane-associated ring finger (C3HC4) 1), also known as RNF171 (RING finger protein 171), is a 289 amino acid multi-pass membrane protein that localizes to the cytoplasmic side of vesicular membranes and contains one RING-CH-type zinc finger. Expressed in lung, spleen and lymph nodes, MARCH1 functions as an E3 ubiquitin-protein ligase that is thought to mediate the ubiquitination and subsequent degradation of select proteins, including CD71 and B7-2. Multiple isoforms of MARCH1 exist due to alternative splicing events.

REFERENCES

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. *Cell* 79: 13-21.
2. Ciechanover, A. and Schwartz, A.L. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. *FASEB J.* 8: 182-191.
3. Hochstrasser, M. 1995. Ubiquitin, proteasomes and the regulation of intracellular protein degradation. *Curr. Opin. Cell Biol.* 7: 215-223.
4. Liakopoulos, D., et al. 1998. A novel protein modification pathway related to the ubiquitin system. *EMBO J.* 17: 2208-2214.
5. Thibodeau, J., et al. 2008. Interleukin-10-induced MARCH1 mediates intracellular sequestration of MHC class II in monocytes. *Eur. J. Immunol.* 38: 1225-1230.
6. De Gassart, A., et al. 2008. MHC class II stabilization at the surface of human dendritic cells is the result of maturation-dependent MARCH I down-regulation. *Proc. Natl. Acad. Sci. USA* 105: 3491-3496.
7. Lapaque, N., et al. 2009. The HLA-DR α chain is modified by polyubiquitination. *J. Biol. Chem.* 284: 7007-7016.

CHROMOSOMAL LOCATION

Genetic locus: MARCH1 (human) mapping to 4q32.2; March1 (mouse) mapping to 8 B3.1.

SOURCE

MARCH1 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MARCH1 of human origin.

STORAGE

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

PROTOCOLS

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104371 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MARCH1 (P-15) is recommended for detection of MARCH1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 other MARCH family members.

Suitable for use as control antibody for MARCH1 siRNA (h): sc-89278, MARCH1 siRNA (m): sc-106199, MARCH1 shRNA Plasmid (h): sc-89278-SH, MARCH1 shRNA Plasmid (m): sc-106199-SH, MARCH1 shRNA (h) Lentiviral Particles: sc-89278-V and MARCH1 shRNA (m) Lentiviral Particles: sc-106199-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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