SANTA CRUZ BIOTECHNOLOGY, INC.

MARCH1 (D-16): sc-104369

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., et al. 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-DRα 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 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104369 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MARCH1 (D-16) 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 isoform MARCH1-2; 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.