

MARCH3 (G-14): sc-247949

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). MARCH3 (membrane-associated ring finger (C3HC4) 3), also known as RNF173, is a 253 amino acid multi-pass membrane protein that localizes to cytoplasmic vesicles and early endosomes and contains one RING-CH-type zinc finger. Involved in the pathway of protein modification, MARCH3 functions as an E3 ubiquitin-protein ligase that accepts a ubiquitin residue from an E2 ubiquitin-conjugating enzyme and is thought to be involved in endosomal trafficking events.

REFERENCES

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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. Bartee, E., et al. 2004. Downregulation of major histocompatibility complex class I by human ubiquitin ligases related to viral immune evasion proteins. *J. Virol.* 78: 1109-1120.
6. Fukuda, H., et al. 2006. MARCH-III is a novel component of endosomes with properties similar to those of MARCH-II. *J. Biochem.* 139: 137-145.
7. Meijer, I.A., et al. 2008. A novel duplication confirms the involvement of 5q23.2 in autosomal dominant leukodystrophy. *Arch. Neurol.* 65: 1496-1501.
8. Brussino, A., et al. 2009. A novel family with Lamin B1 duplication associated with adult-onset leucoencephalopathy. *J. Neurol. Neurosurg. Psychiatr.* 80: 237-240.

CHROMOSOMAL LOCATION

Genetic locus: MARCH3 (human) mapping to 5q23.2; March3 (mouse) mapping to 18 D3.

SOURCE

MARCH3 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MARCH3 of human origin.

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-247949 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MARCH3 (G-14) is recommended for detection of MARCH3 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.

MARCH3 (G-14) is also recommended for detection of MARCH3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MARCH3 siRNA (h): sc-91851, MARCH3 siRNA (m): sc-149267, MARCH3 shRNA Plasmid (h): sc-91851-SH, MARCH3 shRNA Plasmid (m): sc-149267-SH, MARCH3 shRNA (h) Lentiviral Particles: sc-91851-V and MARCH3 shRNA (m) Lentiviral Particles: sc-149267-V.

Molecular Weight of MARCH3: 29 kDa.

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.

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.

PROTOCOLS

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