

MARCH4 (A-1): sc-514837

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). MARCH4 (membrane-associated ring finger (C3HC4) 4), also known as RNF174, is a 410 amino acid multi-pass membrane protein that localizes to the golgi apparatus and contains one RING-CH-type zinc finger. Expressed in placenta and brain, MARCH4 functions as an E3 ubiquitin-protein ligase that accepts a ubiquitin residue from an E2 ubiquitin-conjugating enzyme and is thought to promote the degradation of target proteins, such as CD4 and MHC-I. The gene encoding MARCH4 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

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. Gong, S., et al. 2003. A gene expression atlas of the central nervous system based on bacterial artificial chromosomes. *Nature* 425: 917-925.
6. 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.
7. Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 608208. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MARCH4 (human) mapping to 2q35; March4 (mouse) mapping to 1 C3.

SOURCE

MARCH4 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 354-371 near the C-terminus of MARCH4 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514837 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MARCH4 (A-1) is recommended for detection of MARCH4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MARCH4 siRNA (h): sc-94955, MARCH4 siRNA (m): sc-149268, MARCH4 shRNA Plasmid (h): sc-94955-SH, MARCH4 shRNA Plasmid (m): sc-149268-SH, MARCH4 shRNA (h) Lentiviral Particles: sc-94955-V and MARCH4 shRNA (m) Lentiviral Particles: sc-149268-V.

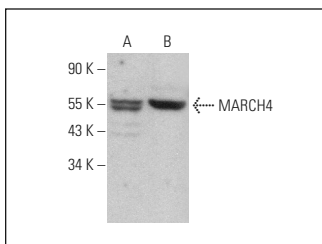
Molecular Weight of MARCH4: 46 kDa.

Positive Controls: A-375 cell lysate: sc-3811, BC₃H1 cell lysate: sc-2299 or EOC 20 whole cell lysate: sc-364187.

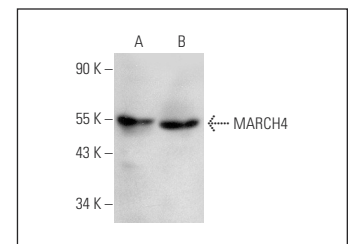
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



MARCH4 (A-1): sc-514837. Western blot analysis of MARCH4 expression in L6 (A) and A-375 (B) whole cell lysates.



MARCH4 (A-1): sc-514837. Western blot analysis of MARCH4 expression in BC₃H1 (A) and EOC 20 (B) whole cell lysates.

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 for detailed protocols and support products.