

MARCKS (N-19): sc-6454

BACKGROUND

Myristoylated alanine-rich protein kinase C substrate (MARCKS), also designated 80K or 80K-L, has been identified as a major cellular substrate for protein kinase C. Human MARCKS is a 332 amino acid protein. The plasma membrane bound protein dissociates from the membrane upon phosphorylation by various PKC isoforms. In NIH/3T3 fibroblasts, PKC α and PKC ϵ , but not PKC δ , are responsible for MARCKS phosphorylation. MARCKS has been found to bind calmodulin, Actin and Synapsin and is a filamentous (F) Actin crosslinking protein.

REFERENCES

1. Stumpo, D.J., et al. 1989. Molecular cloning, characterization, and expression of a cDNA encoding the "80- to 87-kDa" myristoylated alanine-rich C kinase substrate: a major cellular substrate for protein kinase C. *Proc. Natl. Acad. Sci. USA* 86: 4012-4016.
2. Hartwig, J.H., et al. 1992. MARCKS is an actin filament crosslinking protein regulated by protein kinase C and calcium-calmodulin. *Nature* 356: 618-622.

CHROMOSOMAL LOCATION

Genetic locus: MARCKS (human) mapping to 6q21; Marcks (mouse) mapping to 10 B1.

SOURCE

MARCKS (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MARCKS of human origin.

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-6454 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MARCKS (N-19) is recommended for detection of MARCKS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

MARCKS (N-19) is also recommended for detection of MARCKS in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MARCKS siRNA (h): sc-35857, MARCKS siRNA (m): sc-35858, MARCKS shRNA Plasmid (h): sc-35857-SH, MARCKS shRNA Plasmid (m): sc-35858-SH, MARCKS shRNA (h) Lentiviral Particles: sc-35857-V and MARCKS shRNA (m) Lentiviral Particles: sc-35858-V.

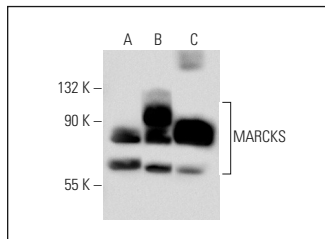
Molecular Weight of MARCKS: 80 kDa.

Positive Controls: MARCKS (h2) 293T Lysate: sc-177518, SK-N-SH cell lysate: sc-2410 or RAW 264.7 whole cell lysate: sc-2211.

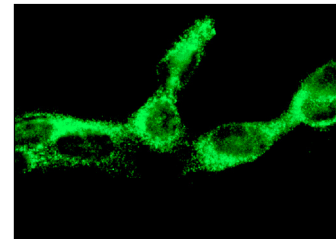
STORAGE

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

DATA



MARCKS (N-19): sc-6454. Western blot analysis of MARCKS expression in non-transfected 293T: sc-177518 (A), human MARCKS transfected 293T: sc-177518 (B) and SK-N-SH (C) whole cell lysates.



MARCKS (N-19): sc-6454. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Dedieu, S., et al. 2004. Myoblast migration is regulated by calpain through its involvement in cell attachment and cytoskeletal organization. *Exp. Cell Res.* 292: 187-200.
2. Andersen, N.D., et al. 2007. Comparison of gene silencing in human vascular cells using small interfering RNAs. *J. Am. Coll. Surg.* 204: 399-408.
3. Rombouts, K., et al. 2008. MARCKS is a downstream effector in platelet-derived growth factor-induced cell motility in activated human hepatic stellate cells. *Exp. Cell Res.* 314: 1444-1454.
4. Louis, M., et al. 2008. TRPC1 regulates skeletal myoblast migration and differentiation. *J. Cell Sci.* 121: 3951-3959.
5. Chen, M., et al. 2009. Integrin $\alpha 6 \beta 4$ controls the expression of genes associated with cell motility, invasion, and metastasis, including S100A4/metastasin. *J. Biol. Chem.* 284: 1484-1494.
6. Poloz, Y.O., 2009. Determining time of death: temperature-dependent postmortem changes in calcineurin A, MARCKS, CaMKII, and protein phosphatase 2A in mouse. *Int. J. Legal Med.* 123: 305-314.
7. Cai, J., et al. 2010. Diacylglycerol kinase δ and protein kinase C α modulate epidermal growth factor receptor abundance and degradation through ubiquitin-specific protease 8. *J. Biol. Chem.* 285: 6952-6959.

RESEARCH USE

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


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Try **MARCKS (JK-8): sc-100777**, our highly recommended monoclonal alternative to MARCKS (N-19).