

MARCKS (C-6): sc-518073

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. Sakai, K., et al. 1989. Isolation of cDNAs encoding a substrate for protein kinase C: nucleotide sequence and chromosomal mapping of the gene for a human 80K protein. *Genomics* 5: 309-315.
3. 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.
4. Herget, T., et al. 1992. Relationship between the major protein kinase C substrates acidic 80-kDa protein-kinase-C substrate (80K) and myristoylated alanine-rich C-kinase substrate (MARCKS). Members of a gene family or equivalent genes in different species. *Eur. J. Biochem.* 209: 7-14.
5. Sakai, K., et al. 1992. Molecular cloning and chromosomal mapping of a cDNA encoding human 80K-L protein: major substrate for protein kinase C. *Genomics* 14: 175-178.

CHROMOSOMAL LOCATION

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

SOURCE

MARCKS (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 309-332 near the C-terminus of MARCKS of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MARCKS (C-6) is available conjugated to agarose (sc-518073 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518073 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518073 PE), fluorescein (sc-518073 FITC), Alexa Fluor[®] 488 (sc-518073 AF488), Alexa Fluor[®] 546 (sc-518073 AF546), Alexa Fluor[®] 594 (sc-518073 AF594) or Alexa Fluor[®] 647 (sc-518073 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518073 AF680) or Alexa Fluor[®] 790 (sc-518073 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MARCKS (C-6) is recommended for detection of MARCKS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

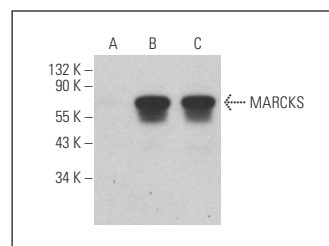
Molecular Weight of MARCKS: 80 kDa.

Positive Controls: MARCKS (h2): 293T Lysate: sc-177518 or MARCKS (m): 293T Lysate: sc-121515.

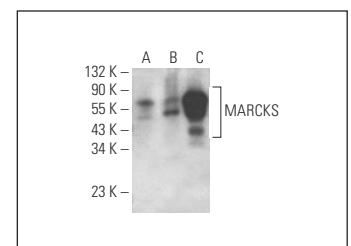
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



MARCKS (C-6): sc-518073. Western blot analysis of MARCKS expression in non-transfected: sc-117752 (A), human MARCKS transfected: sc-177517 (B) and sc-177518 (C) 293T whole cell lysates.



MARCKS (C-6): sc-518073. Western blot analysis of MARCKS expression in non-transfected: sc-117752 (A), human MARCKS transfected: sc-177518 (B) and mouse MARCKS transfected: sc-121515 (C) 293T 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.

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