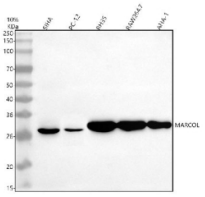
MARCOL Antibody / Myristoylated alanine-rich C kinase substrate-like (FY12235)

Catalog No.	Formulation	Size
FY12235	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	A0A1B0GUY1
Applications	Western Blot: 0.25-0.5ug/ml
Limitations	This MARCOL antibody is available for research use only.



Western blot analysis of MARCOL using anti-MARCOL antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human SIHA whole cell lysates, Lane 2: rat PC-12 whole cell lysates, Lane 3: rat RH35 whole cell lysates, Lane 4: mouse RAW264.7 whole cell lysates, Lane 5: mouse Ana-1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MARCOL antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for MARCOL at approximately 30 kDa. The expected band size for MARCOL is at 30 kDa.

Description

MARCOL antibody detects Myristoylated alanine-rich C kinase substrate-like protein, encoded by the MARCOL gene (also known as MARCKSL1) on chromosome 1p34.1. MARCOL antibody is widely used in research on cytoskeletal

regulation, cell motility, and neuronal development. MARCOL is a member of the MARCKS protein family, which act as substrates for protein kinase C (PKC) and regulate actin cytoskeleton remodeling. Expression is high in developing neurons, lung, and smooth muscle, where MARCOL supports growth cone guidance, cell migration, and differentiation.

Structurally, MARCOL is a ~21 kDa protein containing a myristoylation site for membrane attachment and basic effector domains that bind actin and calmodulin. It is regulated by PKC-mediated phosphorylation, which alters its association with membranes and the actin cytoskeleton. Alternative isoforms exist, reflecting tissue-specific expression and regulation.

Functionally, MARCOL regulates actin filament dynamics and cellular motility. It modulates growth cone morphology in neurons, influencing axonal guidance and synapse formation. In non-neuronal tissues, MARCOL contributes to smooth muscle contractility and epithelial migration. Dysregulation of MARCOL disrupts cytoskeletal dynamics and signaling pathways. Researchers use MARCOL antibody to study PKC signaling, actin remodeling, and neuronal development.

Clinically, MARCOL is linked to cancer and neurological disorders. Overexpression is associated with tumor invasion and metastasis due to enhanced motility. In the nervous system, MARCOL dysregulation has been implicated in neurodevelopmental disorders and epilepsy. Its PKC responsiveness makes MARCOL a marker for signal transduction activity in multiple disease contexts. NSJ Bioreagents provides MARCOL antibody to support research in cytoskeletal biology, neuroscience, and oncology.

Experimentally, MARCOL antibody is applied in western blotting to detect the ~21 kDa protein, in immunofluorescence microscopy to visualize actin interactions, and in immunohistochemistry to evaluate tissue distribution. Co-immunoprecipitation with MARCOL antibody identifies PKC and actin-binding partners.

Application Notes

Optimal dilution of the MARCOL antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human MARCOL was used as the immunogen for the MARCOL antibody.

Storage

After reconstitution, the MARCOL antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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