

# Affinity-Purified Rabbit Anti-Phospho-MARCKS (S152/S156) Certificate of Analysis

## ORDERING INFORMATION

**Catalog Number:** PPS010

**Lot Numbers:** 1134638  
1417807

**Size:** 100 µL (sufficient for 10 mini-blot)

**Storage:** ≤ -20° C

**Specificity:** Human, mouse, rat, *Xenopus*  
~83 kDa MARCKS protein  
phosphorylated at S152/S156

**Immunogen:** Phosphopeptide corresponding  
to amino acid residues  
surrounding the phospho-  
S152/S156 of MARCKS

**Ig Type:** rabbit IgG

**Applications:** Western blot

## Description

Rat MARCKS (myristoylated, alanine-rich C kinase protein substrate) is an 83 kDa, 309 amino acid intracellular protein that belongs to the MARCKS family of molecules. It is an actin-organizing molecule and a key substrate for activated protein kinase C (PKC) and PKC-related kinase. MARCKS is normally sequestered on the inner face of the plasma membrane. Here, it is bound to phosphatidylserine (PS) via electrostatic and hydrophobic interactions. Upon integrin ligation ( $\alpha5\beta1$ ), PKC is activated, and phosphorylates MARCKS at S152 and S156. This breaks the PS interaction, forcing MARCKS into the cytosol. Subsequent cytosolic dephosphorylation of MARCKS induces MARCKS-mediated polymerization of actin and its return to the membrane.

## Preparation

Prepared from rabbit serum by affinity purification using a Sulfo-Link<sup>®</sup> column matrix to which the peptide immunogen was coupled.

## Formulation

100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50% glycerol.

## Storage

For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

## Specificity

Specific for the ~83 kDa MARCKS protein phosphorylated at S152/S156 in Western blots of rat brain homogenates.

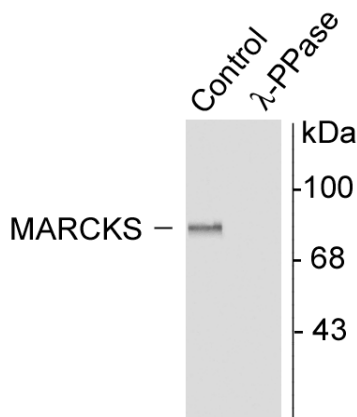
## Applications

**Western blot** - 1:1000

**Optimal dilutions should be determined by each laboratory for each application.**

## References

1. Tapp, H. *et al.* (2005) *J. Biol. Chem.* **280**:9946.
2. Disatnik, M-H. *et al.* (2004) *J. Cell Sci.* **117**:4469.
3. Palmer, R.H. *et al.* (1996) *FEBS Lett.* **378**:281.
4. Nakaoka, T. *et al.* (1996) *J. Biol. Chem.* **270**:12147.
5. Heemskerk, F.M.J. *et al.* (1993) *Biochem. Biophys. Res. Commun.* **190**:236.



Western blot of rat brain lysate showing specific immunolabeling of the ~83 kDa MARCKS protein phosphorylated at S152/S156 (Control). The phosphospecificity of this labeling is demonstrated by treatment with 1200 U of  $\lambda$  Phosphatase ( $\lambda$ -PPase) for 30 minutes before being exposed to the Anti-Phospho-MARCKS (S152/S156). The immunolabeling is completely eliminated by treatment with  $\lambda$ -PPase.

Diane Wotta

Quality & Regulatory Affairs

Sulfo-Link is a registered trademark of Pierce

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

**R&D Systems, Inc.**  
**1-800-343-7475**