

For Research Use Only

# Phospho-MARCKS (Ser167/170) Polyclonal antibody



Catalog Number: 29145-1-AP

## Basic Information

<b>Catalog Number:</b> 29145-1-AP	<b>GenBank Accession Number:</b> BC089040	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 100ul , Concentration: 900 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 4082	<b>Recommended Dilutions:</b> WB 1:2000-1:10000 IF 1:200-1:800
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P29966	
<b>Isotype:</b> IgG	<b>Full Name:</b> myristoylated alanine-rich protein kinase C substrate	
	<b>Calculated MW:</b> 32 kDa	
	<b>Observed MW:</b> 80 kDa	

## Applications

<b>Tested Applications:</b> WB, IF, ELISA	<b>Positive Controls:</b>
<b>Species Specificity:</b> Human	<b>WB :</b> λ phosphatase treated HeLa cells, <b>IF :</b> λ phosphatase treated HeLa cells,

## Background Information

The Myristoylated Alanine Rich C-Kinase Substrate (MARCKS) is a ubiquitous, highly conserved protein among vertebrates, which is essential for postnatal survival, and has been widely studied for its functions in the brain and nervous system. Being highly expressed in nervous tissue, particularly during early development but persisting in the adult, it plays numerous roles related to brain growth, neuronal migration, neurite outgrowth, neurotransmitter release, and synaptic plasticity. Protein kinase C (PKC) phosphorylates MARCKS, which converts MARCKS from a membrane-bound protein to a cytoplasmic protein. The phosphorylation site of MARCKS protein is called the effector domain (ED). Its structure is highly conserved. It can be combined with cell membrane, PKC, calcium/calmodulin-dependent kinases (CaMK) and F-actin. Studies have shown that increased membrane-bound, non-phosphorylated MARCKS might be conducive to the stabilization of synaptic morphology. Phosphorylated MARCKS protein (P-MARCKS) can regulate the stability of actin network and alter the synaptic structure. (PMID: 30655546, PMID: 30155805)

## Storage

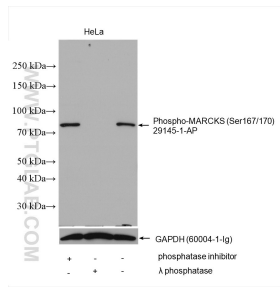
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
**Aliquoting is unnecessary for -20°C storage**

\*\*\* 20ul sizes contain 0.1% BSA

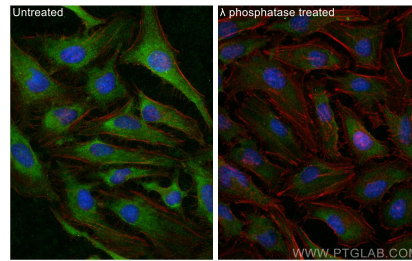
For technical support and original validation data for this product please contact:  
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## Selected Validation Data



Non-treated HeLa cells, phosphatase inhibitor treated and  $\lambda$  phosphatase treated HeLa cells were subjected to SDS PAGE followed by western blot with 29145-1-AP (Phospho-MARCKS (Ser167/170) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Immunofluorescent analysis of (-20°C Ethanol) fixed  $\lambda$  phosphatase treated HeLa cells using Phospho-MARCKS (Ser167/170) antibody (29145-1-AP) at dilution of 1:400 and CoraLite® 488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).