

For Research Use Only

# Phospho-AMPK Alpha (Thr172) Recombinant monoclonal antibody, PBS Only

Catalog Number: 80209-6-PBS



## Basic Information

Catalog Number: 80209-6-PBS	GenBank Accession Number: BC048980	Purification Method: Protein A purification
Source: Rabbit	GeneID (NCBI): 5562	CloneNo.: 242923D4
Isotype: IgG	UNIPROT ID: Q13131	
	Full Name: protein kinase, AMP-activated, alpha 1 catalytic subunit	
	Observed MW: 64 kDa	

## Applications

Tested Applications:  
WB, Indirect ELISA

Species Specificity:  
human, mouse

## Background Information

AMPK is a serine/threonine protein kinase complex consisting of a catalytic  $\alpha$ -subunit ( $\alpha 1$  and  $\alpha 2$ ), a scaffolding  $\beta$ -subunit ( $\beta 1$  and  $\beta 2$ ), and a regulatory  $\gamma$ -subunit ( $\gamma 1$ ,  $\gamma 2$ , and  $\gamma 3$ ). Ubiquitous expression of AMPK  $\alpha 1$ -,  $\beta 1$ -, and  $\gamma 1$ -subunits in many tissues makes the  $\alpha 1 \beta 1 \gamma 1$  complex a reference for AMPK assays to identify AMPK activators. AMPK is generally quiescent under normal conditions but is activated in response to signals and stresses that increase the AMP/ATP ratio, such as hypoglycemia, strenuous exercise, anoxia, and ischemia. An increase in the ratio of AMP/ATP activates AMPK by several mechanisms, including direct allosteric activation and covalent modification in which an AMP-dependent AMPK kinase (AMPKK) phosphorylates the  $\alpha$  subunit on Thr172. Once activated, AMPK switches on catabolic pathways that generate ATP, while switching off ATP-consuming processes (e.g., biosynthesis, cell growth, and proliferation), and in doing so acts as an "energy gauge". (PMID: 27034026, PMID: 21980456, PMID: 27600021)

This antibody can recognize the phosphorylation sites of Thr183 in AMPK Alpha 1 and Thr172 in AMPK Alpha 2.

## Storage

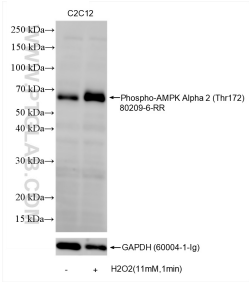
Storage:  
Store at  $-80^{\circ}\text{C}$ .  
The product is shipped with ice packs. Upon receipt, store it immediately at  $-80^{\circ}\text{C}$

Storage Buffer:  
PBS only, pH7.3

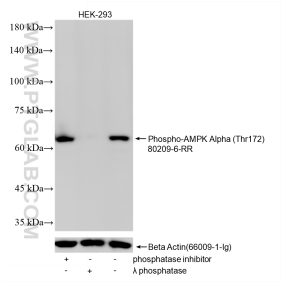
For technical support and original validation data for this product please contact:  
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

Selected Validation Data



Non-treated C2C12 cells and H2O2 treated C2C12 cells were subjected to SDS PAGE followed by western blot with 80209-6-RR (Phospho-AMPK Alpha (Thr172) antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH (60004-1-Ig) antibody as a loading control. This data was developed using the same antibody clone with 80209-6-PBS in a different storage buffer formulation.



Non-treated, phosphatase inhibitor treated and  $\lambda$  phosphatase treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80209-6-RR (Phospho-AMPK Alpha (Thr172) antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Actin (66009-1-Ig) antibody as a loading control. This data was developed using the same antibody clone with 80209-6-PBS in a different storage buffer formulation.

