

## Basic Information

<b>Product Name</b>	Anti-AMPK Alpha 1/PRKAA1 Antibody	
<b>Gene Name</b>	PRKAA1	
<b>Source</b>	Rabbit	
<b>Isotype</b>	IgG	
<b>Species Reactivity</b>	human, mouse, rat	
<b>Tested Application</b>	WB, ICC/IF, FCM, ELISA	
<b>Contents</b>	500 ug/ml antibody with PBS , 0.02% NaN3 , 1 mg BSA and 50% glycerol.	
<b>Immunogen</b>	E. coli-derived human AMPK alpha 1 recombinant protein (Position: F377-R446).	
<b>concentration</b>	500 ug/ml	
<b>Purification</b>	Immunogen affinity purified.	
<b>Observed MW</b>	64KD	
<b>Dilution Ratios</b>	Western blot(WB):	1:500-2000
	(ELISA):	1:100-1000
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Flow cytometry (FCM):	1-3 $\mu\text{g}/1 \times 10^6$ cells

## Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

## Background Information

5'-AMP-activated protein kinase catalytic subunit alpha-1 is an enzyme that in humans is encoded by the PRKAA1 gene. The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways.

## Selected Validation Data

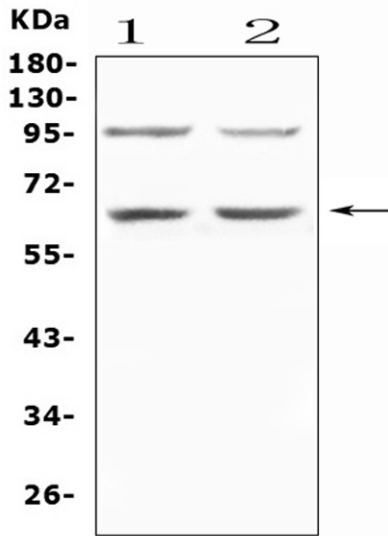


Figure 1. Western blot analysis of AMPK alpha 1 using anti-AMPK alpha 1 antibody (A00994-3). Lane 1: human PANC-1 whole cell lysates, Lane 2: human Jurkat whole cell lysates. anti-AMPK alpha 1 antigen affinity purified polyclonal antibody (Catalog # A00994-3) probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for AMPK alpha 1 at approximately 64 kDa. The expected band size for AMPK alpha 1 is at 64 kDa.

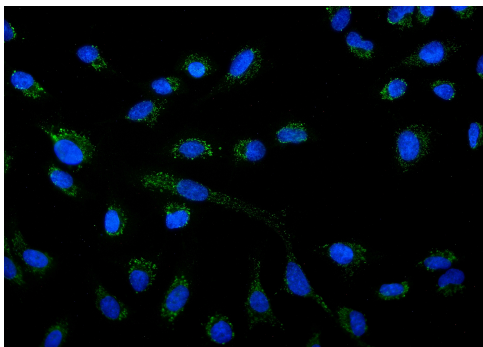


Figure 2. ICC analysis of anti-PRKAA1 antibody (A00994-3) was detected in immunocytochemical section of A549 cells. Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).

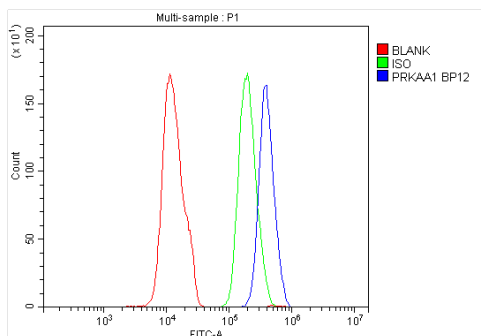


Figure 3. Flow cytometry analysis of SiHa cell (1x10<sup>6</sup>). DyLight488 conjugated goat anti-rabbit IgG (blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight488. Unlabelled sample (Red line).