

Basic Information

Product Name	Anti-AMPK Beta 2/PRKAB2 Antibody	
Gene Name	PRKAB2	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC, FCM, ICC/IF	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human AMPK beta 2 different from the related mouse sequence by three amino acids, and from the related rat sequence by two amino acids.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	34 kDa	
Dilution Ratios	Western blot (WB):	1:500-2000
	Immunohistochemistry (IHC):	1:50-400
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Flow Cytometry (Fixed):	1:50-200
	(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

Storage

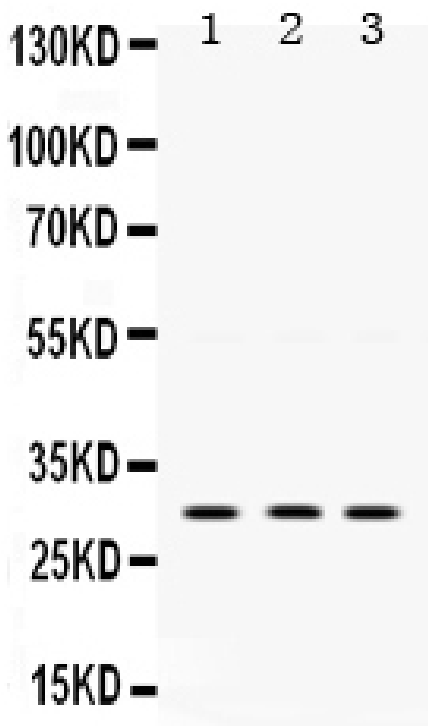
12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

5'-AMP-activated protein kinase subunit beta-2 is an enzyme that in humans is encoded by the PRKAB2 gene. The protein encoded by this gene is a regulatory subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. It is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This subunit may be a positive regulator of AMPK

activity. It is highly expressed in skeletal muscle and thus may have tissue-specific roles. Multiple alternatively spliced transcript variants have been found for this gene.

Selected Validation Data



Western blot analysis of AMPK Beta 2/PRKAB2 using anti-AMPK Beta 2/PRKAB2 antibody (PB0723). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

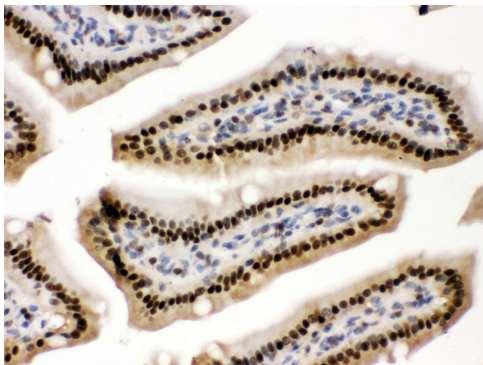
Lane 1: Rat Brain tissue lysates,

Lane 2: Rat Skeletal Muscle tissue lysates,

Lane 3: PANC whole cell lysates.

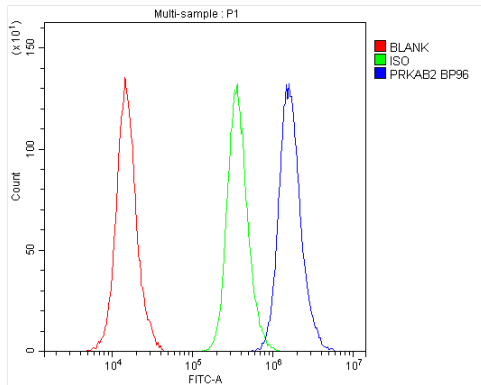
After electrophoresis, proteins were transferred to a membrane.

Then the membrane was incubated with rabbit anti-AMPK Beta 2/PRKAB2 antigen affinity purified polyclonal antibody (PB0723) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for AMPK Beta 2/PRKAB2 at approximately 34 kDa. The expected band size for AMPK Beta 2/PRKAB2 is at 30 kDa.



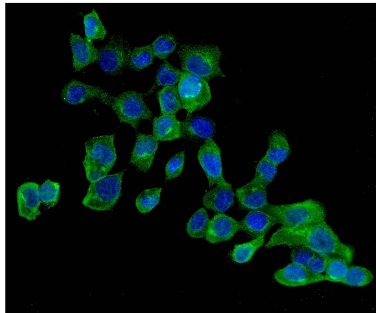
IHC analysis of AMPK Beta 2/PRKAB2 using anti-AMPK Beta 2/PRKAB2 antibody (PB0723).

AMPK Beta 2/PRKAB2 was detected in a paraffin-embedded section of mouse intestine tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-AMPK Beta 2/PRKAB2 Antibody (PB0723) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



Flow Cytometry analysis of A431 cells using anti-AMPK Beta 2/PRKAB2 antibody (PB0723).

Overlay histogram showing A431 cells stained with PB0723 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-AMPK Beta 2/PRKAB2 Antibody (PB0723) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF analysis of AMPK Beta 2/PRKAB2 using anti-AMPK Beta 2/PRKAB2 antibody (PB0723).

AMPK Beta 2/PRKAB2 was detected in an immunocytochemical section of A431 cells. The section was incubated with rabbit anti-AMPK Beta 2/PRKAB2 Antibody (PB0723) at a dilution of 1:100. DyLight®488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).