

Product datasheet for **TA336924**

AMPK alpha 1 (PRKAA1) Mouse Monoclonal Antibody [Clone ID: 2B7]

Product data:

Product Type:	Primary Antibodies
Clone Name:	2B7
Applications:	ELISA, FC, ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Flow Cytometry: 1:200-1:400, ELISA: 1:10000, Immunohistochemistry-Paraffin: 1:200-1:1000, Simple Western: 1:50, Western Blot: 1:500, Immunocytochemistry/ Immunofluorescence: 1:200-1:1000, Immunohistochemistry: 1:200 - 1:1000
Reactivity:	Human, Mouse, Rat, Primate
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified recombinant fragment of human AMPK alpha 1 expressed in E. coli. [UniProt# Q13131]
Formulation:	PBS, 0.03% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Ammonium sulfate precipitation
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	64 kDa
Gene Name:	protein kinase AMP-activated catalytic subunit alpha 1
Database Link:	NP_996790 Entrez Gene 65248 Rat Entrez Gene 105787 Mouse Entrez Gene 5562 Human Q13131



[View online »](#)

Background:

The protein 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. Alternatively spliced transcript variants encoding distinct isoforms have been observed.

Synonyms:

AMPK; AMPKa1

Note:

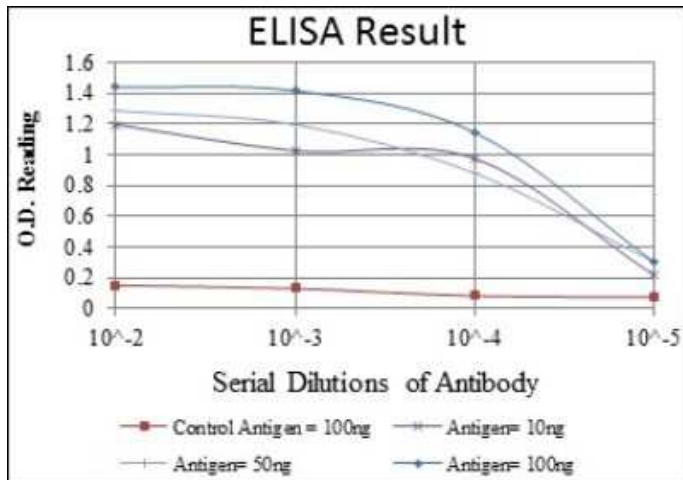
This AMPK alpha 1 (2B7) antibody is useful for Western blot, Immunohistochemistry on paraffin-embedded sections, Immunocytochemistry/Immunofluorescence, Flow Cytometry and ELISA.

Protein Families:

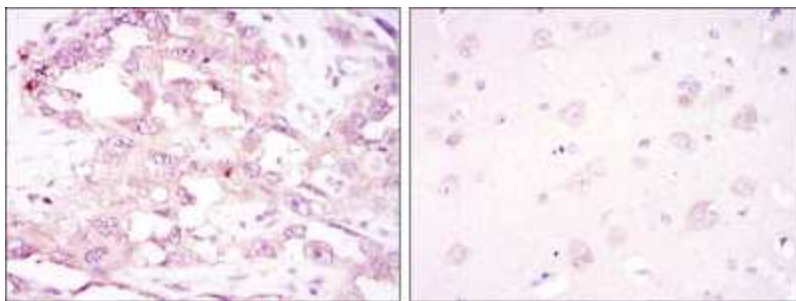
Druggable Genome, Protein Kinase

Protein Pathways:

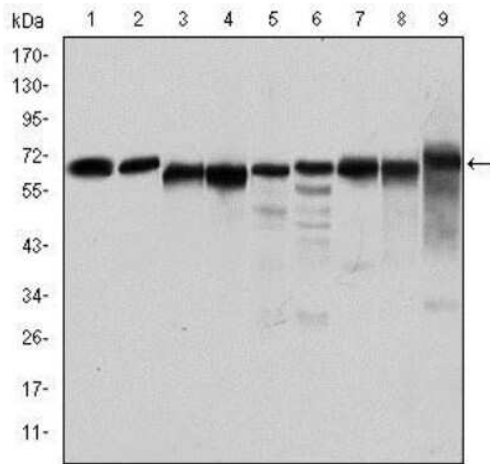
Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway, mTOR signaling pathway, Regulation of autophagy

Product images:


ELISA: AMPK alpha 1 Antibody (2B7) TA336924 - Red: Control Antigen (100ng); Purple: Antigen (10ng); Green: Antigen (50ng); Blue: Antigen (100ng).



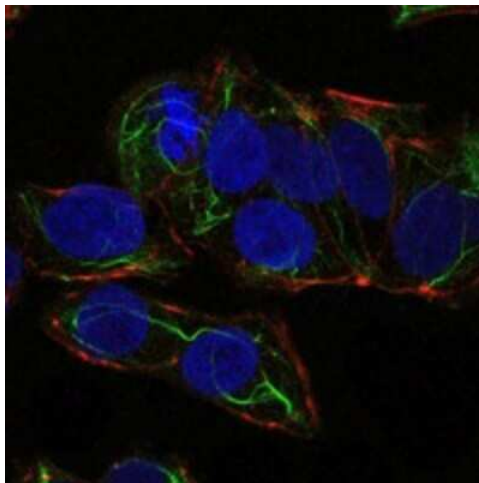
Immunohistochemistry-Paraffin: AMPK alpha 1 Antibody (2B7) TA336924 - Immunohistochemical analysis of paraffin-embedded ovarian cancer (left) and brain tissues (right) using AMPK alpha 1 mouse mAb with DAB staining.



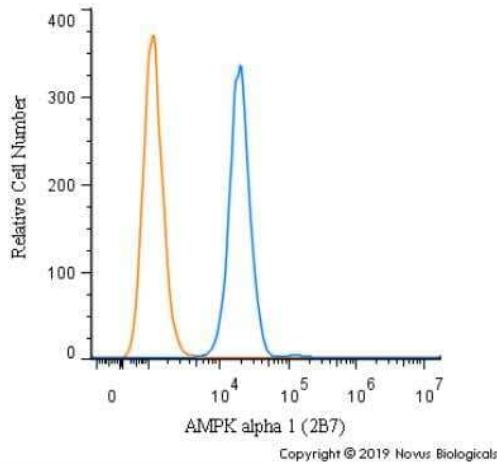
Western Blot: AMPK alpha 1 Antibody (2B7) TA336924 - Western blot analysis using AMPK alpha 1 mouse mAb against Jurkat (1), HeLa (2), HepG2 (3), MCF-7 (4), Cos7 (5), NIH/3T3 (6), K562 (7), HEK293 (8), and PC-12 (9) cell lysate.



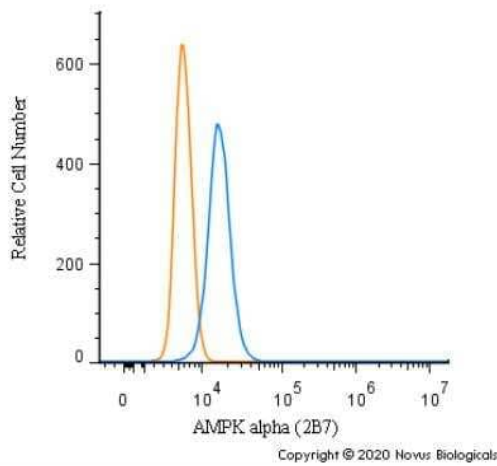
Simple Western: AMPK alpha 1 Antibody (2B7) TA336924 - Simple Western lane view shows a specific band for AMPK Alpha 1 in 0.5 mg/ml of HepG2 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Immunocytochemistry/Immunofluorescence: AMPK alpha 1 Antibody (2B7) TA336924 - Immunofluorescence analysis of NTERA-2 cells using AMPK alpha 1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow Cytometry: AMPK alpha 1 Antibody (2B7) TA336924 - An intracellular stain was performed on RH-30 cells with AMPK alpha 1 Antibody (2B7) TA336924PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Phycoerythrin.



Flow Cytometry: AMPK alpha 1 Antibody (2B7) TA336924 - An intracellular stain was performed on NIH3T3 cells with AMPK alpha 1 Antibody (2B7) TA336924 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).