
Product Name: KD-Validated AMPK Alpha 1 Recombinant Rabbit Monoclonal Antibody
Catalog #: KVAb01491

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 64.0kDa

Antigen Information

Gene Name	PRKAA1 PRKAA1; Protein Kinase AMP-Activated Catalytic Subunit Alpha 1; 5'-AMP-Activated Protein Kinase Catalytic Subunit Alpha-1; Protein Kinase, AMP-Activated, Alpha 1 Catalytic Subunit; Hydroxymethylglutaryl-CoA Reductase Kinase; Acetyl-CoA Carboxylase Kinase; Tau-Protein Kinase PRKAA1; AMPK Subunit Alpha-1; AMPK, Alpha, 1; ACACA Kinase; HMGCR Kinase; EC 2.7.11.1; AMPKa1; 5'-AMP-Activated Protein Kinase, Catalytic Alpha-1 Chain; AMP-Activated Protein Kinase, Catalytic, Alpha-1; AMP -Activate Kinase Alpha 1 Subunit; AMPK Alpha 1; EC 2.7.11.27; EC 2.7.11.31; EC 2.7.11.26; EC 2.7.11; AMPKA1; AMPK1; AMPK
Alternative Names	
Gene ID	5562.0
SwissProt ID	Q13131
Immunogen	A synthesized peptide derived from human AMPK alpha 1

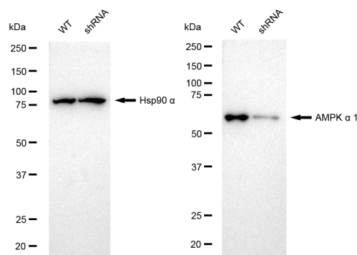
Background

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. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008]

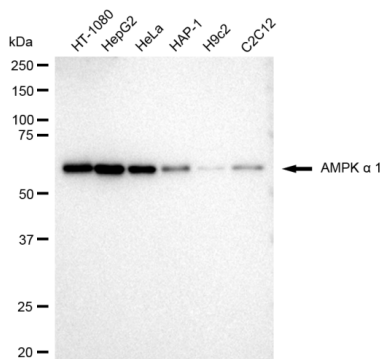
Research Area

Signal Transduction, Cardiovascular, Cancer, Metabolism

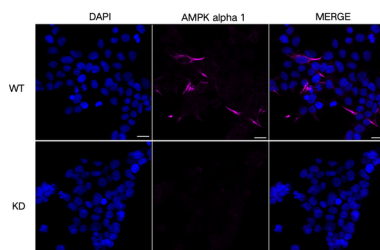
Image Data



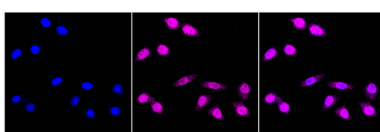
Western blotting analysis using AMPK alpha 1 antibody (KVA01491). AMPK alpha 1 expression in wild type (WT) and AMPK alpha 1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with AMPK alpha 1 antibody (KVA01491, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



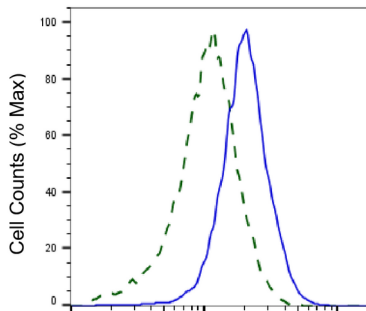
Western blotting analysis using AMPK alpha 1 antibody (KVA01491). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with AMPK alpha 1 antibody (KVA01491, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



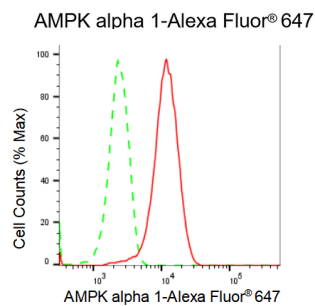
Immunocytochemical staining of HeLa cells using AMPK alpha 1 antibody (KVA01491, 1:1,000), Top panel: wild-type (WT); Bottom panel: AMPK alpha 1 shRNA knockdown (KD). Nuclei were stained blue with DAPI; AMPK alpha 1 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Immunocytochemical staining of HepG2 cells with AMPK alpha 1 antibody (KVA01491, 1:1,000). Nuclei were stained blue with DAPI; AMPK alpha 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



Validation of AMPK alpha 1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with AMPK alpha 1 antibody (KVA01491, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of AMPK alpha 1 expression in HepG2 cells using AMPK alpha 1 antibody (KVA01491, 1:2,000). Green, isotype control; red, AMPK alpha 1.