

Anti-AMPK alpha 1 PRKAA1 Rabbit Monoclonal Antibody

Catalog Number: M00994

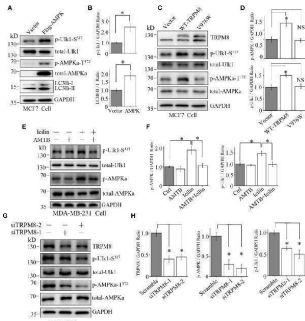
Overview

Product Name	Anti-AMPK alpha 1 PRKAA1 Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-AMPK alpha 1 PRKAA1 Rabbit Monoclonal Antibody catalog # M00994. Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IP, IF, IHC, ICC, WB
Clonality	Monoclonal CDD-16
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q13131

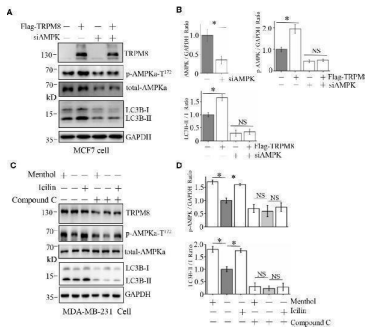
Technical Details

Immunogen	A synthesized peptide derived from human AMPK alpha 1
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000 IHC 1:50-200 ICC/IF 1:50-200 IP 1:20 FC 1:20

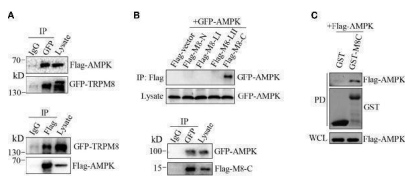
Anti-AMPK alpha 1 PRKAA1 Rabbit Monoclonal Antibody (M00994) Images



Involvement of the AMPK-ULK1-LC3 signaling cascade in TRPM8-stimulated autophagy. (A, B) The construct for Flag-AMPK expression was transiently transfected into MCF7 cells. After 48 h of transfection, the AMPK-ULK1-LC3 signaling cascade-related proteins were detected by WB (N = 3). (C, D) MCF7 cells were transiently transfected with wild type TRPM8, mutant V976W, or control vector. After 48 h of transfection, protein lysates were used for WB analysis (N = 3). (E, F) MDA-MB-231 cells treated with 2 uM icilin, 0.5 uM AMTB, or their combination for 48 h were extracted for WB analysis (N = 3). (G, H) MCF7 cells were transfected with siRNA against human TRPM8; siRNA against TRPM8 (siTRPM8-1 and siTRPM8-2) successfully knocked down TRPM8 expression compared with that in the control scramble siRNA samples according to WB analysis using an anti-TRPM8 antibody. The AMPK-ULK1-LC3 signaling cascade-related proteins detected by WB analysis using the indicated antibodies (N = 3). N represents the number of replicate experiments. *P < 0.05; NS, not significant. Index in PubMed under a CC BY license. PMID: 33344232

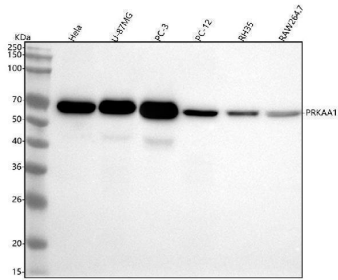


Influence of AMPK impairment on the stimulatory effect of TRPM8 on autophagy. (A, B) MCF7 cells were transiently transfected with siRNA against human AMPK and a Flag-TRPM8 construct. After 48 h of transfection, protein lysates were extracted for WB analysis to determine the effect of TRPM8 overexpression on basal autophagy in the presence of AMPK knockdown (N = 3). (C, D) WB analysis of cell lysates of MDA-MB-231 cells treatment with 2 uM icilin, 10 uM menthol, or a combination of 10 M compound C for 48 h (N = 3). N represents the number of replicate experiments. *P < 0.05; NS, not significant. Index in PubMed under a CC BY license. PMID: 33344232

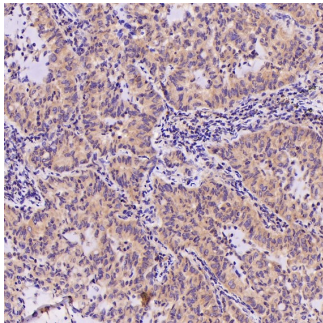


AMPK interacts with TRPM8. (A, B) Co-IP analysis. (A) Constructs for GFP-TRPM8 and Flag-AMPK expression were transiently transfected into MCF7 cells. After 48 h of transfection, protein lysates were immunoprecipitated with an anti-GFP antibody and assayed by immunoblot with an anti-Flag antibody (lower panel). Reciprocal Co-IP with an anti-Flag antibody used for immunoprecipitation and anti-GFP used for WB analysis (upper panel) (N = 3). (B) The construct for GFP-AMPK expression was cotransfected with M8-N, M8-LI, M8-LII, or M8-C into MCF7 cells. Protein lysates were immunoprecipitated with an anti-Flag antibody and assayed by immunoblot with an anti-GFP antibody (upper). The constructs for GFP-AMPK and Flag-M8-C expression were cotransfected into MCF7 cells. Protein lysates were immunoprecipitated with an anti-GFP antibody and assayed by immunoblot with an anti-Flag antibody (upper) (N = 3). (C) GST pull-down analysis. Protein lysates of MCF7 cells transiently expressing Flag-AMPK were incubated with purified cytoplasmic C-terminus of TRPM8 GST fusion protein

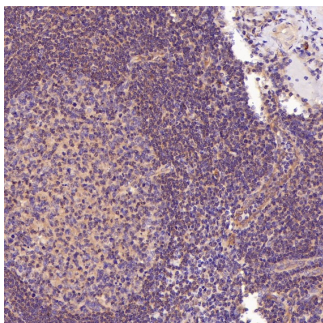
(GST-M8C). GST-M8C, but not control GST, successfully pulled down Flag-AMPK. PD: pull-down. The lysate was used as a positive control (N = 3). N represents the number of replicate experiments. PD, pull down; WCL, whole cell lysates. Index in PubMed under a CC BY license. PMID: 33344232



Western blot analysis of AMPK alpha 1 using anti-AMPK alpha 1 antibody (M00994). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human U-87MG whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: rat PC-12 whole cell lysates, Lane 5: rat RH35 whole cell lysates, Lane 6: mouse RAW264.7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-AMPK alpha 1 antigen affinity purified monoclonal antibody (Catalog # M00994) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. 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.

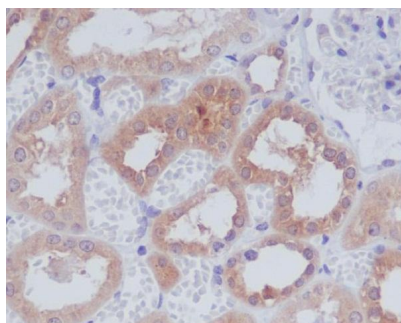
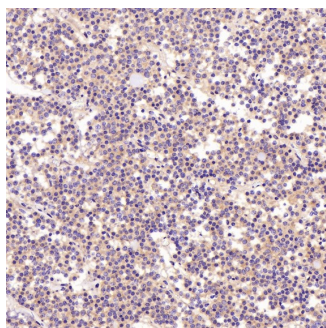


Immunohistochemical analysis of paraffin-embedded Human lung adenocarcinoma, using the Antibody at 1:500 dilution.

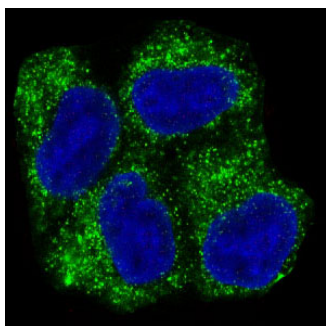


Immunohistochemical analysis of paraffin-embedded Human tonsil, using the Antibody at 1:500 dilution.

Immunohistochemical analysis of paraffin-embedded Human pituitary tumor, using the Antibody at 1:500 dilution.



Immunohistochemical analysis of paraffin-embedded human kidney, using AMPK alpha 1 Antibody.



Immunofluorescent analysis of HeLa cells, using AMPK alpha 1 Antibody .

1 Publications Citing This Product

1. PubMed ID: 25162824, Hou S, Zheng F, Li Y, Gao L, Zhang J. Int J Mol Sci. 2014 Aug 26;15(9):15026-43. Doi: 10.3390/Ijms150915026. The Protective Effect Of Glycyrrhizic Acid On Renal Tubular Epithelial Cell Injury Induced By High Glucose.

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