

Rabbit AMPKalpha1/AMPKalpha2 Polyclonal Antibody | anti-AMPKalpha1/AMPKalpha2 antibody

AMPKalpha1/AMPKalpha2(Phospho-Thr183/Thr172) Antibody

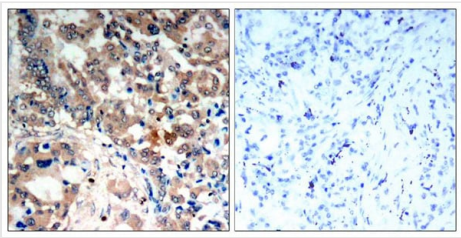
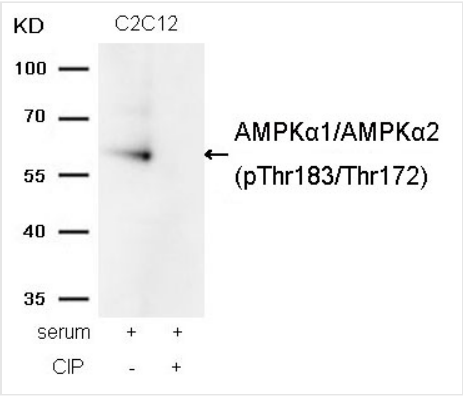
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA306930	Rabbit	Human, Mouse, Rat	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

AMPKalpha1/AMPKalpha2; Polyclonal Antibody; AMPKalpha1/AMPKalpha2(Phospho-Thr183/Thr172) Antibody; AMPKa1/AMPKa2(Phospho-Thr183/Thr172) Antibody; AMPK; AMPKa1; AMPK2; anti-AMPKalpha1/AMPKalpha2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Specificity	The antibody detects endogenous level of AMPKalpha1/AMPKalpha2 only when phosphorylated at threonine 183 or 172.
Purity/Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using
Form/Format	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1.0 mg/ml (varies by lot)
Sequence Length	559
Applicable Applications for anti-AMPKalpha1/AMPKalpha2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of threonine 183(L-R-T(p)-S-C)/threonine172(L- R-T(p)-S-C) derived from Human AMPKalpha1/AMPKalpha2.
Modification	Phospho-Thr183/Thr172
Target Name	AMPKalpha1/AMPKalpha2
Preparation and Storage	Store at -20 degree C



IHC (Immunohistochemistry)
Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue, using AMPKalpha1/AMPKalpha2(Phospho-Thr174/Thr172) Antibody ().

WB (Western Blot)
Western blot analysis of extracts from C2C12 cells, treated with serum or calf intestinal phosphatase (CIP), using AMPKalpha1/AMPKalpha2(Phospho-Thr174/Thr172) Antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-AMPKalpha1/AMPKalpha2 antibody

Catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. Regulates lipid synthesis by phosphorylating and inactivating lipid metabolic enzymes such as ACACA, ACACB, GYS1, HMGCR and LIPE; regulates fatty acid and cholesterol synthesis by phosphorylating acetyl-CoA carboxylase (ACACA and ACACB) and hormone-sensitive lipase (LIPE) enzymes, respectively. Regulates insulin-signaling and glycolysis by phosphorylating IRS1, PFKFB2 and PFKFB3. AMPK stimulates glucose uptake in muscle by increasing the translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane, possibly by mediating phosphorylation of TBC1D4/AS160. Regulates transcription and chromatin structure by phosphorylating transcription regulators involved in energy metabolism such as CRTC2/TORC2, FOXO3, histone H2B, HDAC5, MEF2C, MLXIPL/ChREBP, EP300, HNF4A, p53/TP53, SREBF1, SREBF2 and PPARGC1A. Acts as a key regulator of glucose homeostasis in liver by phosphorylating CRTC2/TORC2, leading to CRTC2/TORC2 sequestration in the cytoplasm. In response to stress, phosphorylates 'Ser-36' of histone H2B (H2BS36ph), leading to promote transcription. Acts as a key regulator of cell growth and proliferation by phosphorylating TSC2, RPTOR and ATG1: in response to nutrient limitation, negatively regulates the mTORC1 complex by phosphorylating RPTOR component of the mTORC1 complex and by phosphorylating and activating TSC2. In response to nutrient limitation, promotes autophagy by phosphorylating and activating ULK1. AMPK also acts as a regulator of circadian rhythm by mediating phosphorylation of CRY1, leading to destabilize it. May regulate the Wnt signaling pathway by phosphorylating CTNNB1, leading to stabilize it. Also has tau-protein kinase activity: in response to amyloid beta A4 protein (APP) exposure, activated by CAMKK2, leading to phosphorylation of MAPT/TAU; however the relevance of such data remains unclear in vivo. Also phosphorylates CFTR, EEF2K, KLC1, NOS3 and SLC12A1.

Product Categories/Family for anti-AMPKalpha1/AMPKalpha2 antibody
Phospho-specific Ab

NCBI AND UNIPROT INFORMATION

NCBI GI #	94557301
NCBI GeneID	5562
NCBI Accession #	NP_006242.5
NCBI GenBank Nucleotide #	NM_006251.5
UniProt Accession #	Q13131; O00286; Q5D0E1; Q86VS1; Q9UNQ4; A8MTQ6; B2R7E1
Molecular Weight	65,523 Da

NCBI Official Full Name	5'-AMP-activated protein kinase catalytic subunit alpha-1 isoform 1
NCBI Official Synonym Full Names	protein kinase, AMP-activated, alpha 1 catalytic subunit
NCBI Official Symbol	PRKAA1
NCBI Official Synonym Symbols	AMPK; AMPKa1
NCBI Protein Information	5'-AMP-activated protein kinase catalytic subunit alpha-1
UniProt Protein Name	5'-AMP-activated protein kinase catalytic subunit alpha-1
UniProt Gene Name	PRKAA1
UniProt Synonym Gene Names	AMPK1; AMPK subunit alpha-1; ACACA kinase; HMGCR kinase
UniProt Entry Name	AAPK1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ampkalpha1-ampkalpha2-antibody-immunohistochemistry-western-blot-elisa/306930>