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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-AMPK Alpha2 Antibody (PSer377)

Rabbit Anti-Human AMPK alpha2 (pSer377) Polyclonal
Catalog No. SPC-914



Discovery through partnership | Excellence through quality

Overview

Product Name

AMPK alpha2 Antibody (pSer377)

Description

Rabbit Anti-Human AMPK alpha2 (pSer377) Polyclonal

Species Reactivity

Human

Applications

WB, AM

Antibody Dilution

WB (1:250); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen Species

Human

Immunogen

A phospho-specific peptide corresponding to residues surrounding Ser377 of human AMPK alpha2 (AA435-441)

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS pH7.4, 50% glycerol, 0.025% Thimerosal

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Peptide Affinity Purified

Clonality

Polyclonal

Specificity

Detects 63 kDa.

Cite This Product

Rabbit Anti-Human AMPK alpha2 (pSer377) Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-914)

Certificate Of Analysis

A 1:250 dilution of SPC-914 was sufficient for detection of AMPK alpha2 (pSer377) in 10 µg of HepG2 cell lysate by ECL immunoblot analysis using goat anti-rabbit IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

5'-AMP-activated protein kinase catalytic subunit alpha-2 antibody, AAPK2_HUMAN antibody, ACACA kinase antibody, Acetyl-CoA carboxylase kinase antibody, AMPK alpha 2 chain antibody, AMPK subunit alpha-2 antibody, AMPK2 antibody, AMPKalpha2 antibody, HMGCR kinase antibody, Hydroxymethylglutaryl-CoA reductase kinase antibody, PRKAA antibody, PRKAA2 antibody

Cellular Localization

Cytoplasm, Nucleus

Accession Number

NP_006243

Gene ID

5563

Swiss Prot

P54646

Scientific Background

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, MLX1PL/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 phosphorylates CFTR, EEF2K, KLC1, NOS3 and SLC12A1.

Product Images

Currently there are no images for this product

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.