SANTA CRUZ BIOTECHNOLOGY, INC.

AMPKβ2 (F-17): sc-19137



BACKGROUND

AMPK (for 5'-AMP-activated protein kinase) is a heterotrimeric complex comprising a catalytic α subunit and regulatory β and γ subunits. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is activated by high AMP and low ATP through a mechanism involving allosteric regulation, promotion of phosphorylation by an upstream protein kinase known as AMPK kinase, and inhibition of dephosphorylation. Activated AMPK can phosphorylate and regulate in vivo hydroxymethylglutaryl-CoA reductase and acetyl-CoA carboxylase, which are key regulatory enzymes of sterol synthesis and fatty acid synthesis, respectively. The human AMPK α 1 and AMPK α 2 genes encode 548 amino acid and 552 amino acid proteins, respectively. Human AMPK-B1 encodes a 271 amino acid protein and human AMPK_B2 encodes a 272 amino acid protein. The human AMPKy1 gene encodes a 331 amino acid protein. Human AMPKy2 and AMPKy3, which are 569 and 492 amino acid proteins, respectively, contain unique N-terminal domains and may participate directly in the binding of AMP within the AMPK complex.

CHROMOSOMAL LOCATION

Genetic locus: PRKAB2 (human) mapping to 1q21.1; Prkab2 (mouse) mapping to 3 F2.2.

SOURCE

AMPK β 2 (F-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AMPK β 2 of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19137 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AMPK β 2 (F-17) is recommended for detection of AMPK β 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AMPKβ2 (F-17) is also recommended for detection of AMPKβ2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AMPK β 2 siRNA (h): sc-38927, AMPK β 2 siRNA (m): sc-38928, AMPK β 2 shRNA Plasmid (h): sc-38927-SH, AMPK β 2 shRNA Plasmid (m): sc-38928-SH, AMPK β 2 shRNA (h) Lentiviral Particles: sc-38927-V and AMPK β 2 shRNA (m) Lentiviral Particles: sc-38928-V.

Molecular Weight of AMPKβ2: 30-34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or rat skeletal muscle extract: sc-364810.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



AMPK β 2 (F-17): sc-19137. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and nuclear staining of hepatocytes.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **AMPKβ2 (C-7):** sc-376752 or **AMPKβ2 (F-8):** sc-376897, our highly recommended monoclonal alternatives to AMPKβ2 (F-17).