AMPKα1 (71.54): sc-130394

**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 upstream protein kinase known as AMPK kinase, and inhibition of dephosphorylation mechanism involving allosteric regulation, promotion of phosphorylation by an synthetic pathways. AMPK is activated by high AMP and low ATP through a stress that cause ATP depletion by switching off ATP-consuming biological processes.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: PRKAA1 (human) mapping to 5p13.1.

**SOURCE**

AMPKα1 (71.54) is a mouse monoclonal antibody raised against recombinant AMPKα1 of human origin.

**PRODUCT**

Each vial contains 100 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**APPLICATIONS**

AMPKα1 (71.54) is recommended for detection of AMPKα1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AMPKα1 siRNA (h): sc-29673, AMPKα1 shRNA Plasmid (h): sc-29673-SH and AMPKα1 shRNA (h) Lentiviral Particles: sc-29673-V.

Molecular Weight of AMPKα1: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG B P-HRP: sc-516102 or m-IgG B P-HRP (Cruz Marker): sc-516102-C (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

Western blot analysis of AMPKα1 phosphorylation in untreated (A,C) and lambda protein phosphatase treated (B,D) C2C12 whole cell lysates. Antibodies tested include p-AMPKα1 (Thr 183/172); sc-101630 (A,B) and AMPKα1 (71.54); sc-130394 (C,D).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**PROTOCOLS**

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