AMPKα1/2 (D-6): sc-74461

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, inactivation of phosphorylation by an upstream protein kinase known as AMPK kinase, and inhibition of dephosphorylation. Activated AMPK can phosphorylate and regulate upstream protein kinases, known as AMPK kinases, and inhibition of dephosphorylation involves allosteric regulation, promotion of phosphorylation by an upstream protein kinase known as AMPK kinase, and inhibition of dephosphorylation.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PRKA1 (human) mapping to 5p13.1, PRKAA2 (human) mapping to 1p32.2; Prkaa1 (mouse) mapping to 4p15, Prkaa2 (mouse) mapping to 4p6.

SOURCE

AMPKα1/2 (D-6) is a mouse monoclonal antibody raised against amino acids 251-550 mapping at the C-terminus of AMPKα1 of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AMPKα1/2 (D-6) (D-6) is available conjugated to agarose (sc-74461 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74461 HRP), 200 µg/ml, for WB, (HB) and ELISA; to either phycoerythrin (sc-74461 PE), fluorescein (sc-74461 FITC), Alexa Fluor® 488 (sc-74461 AF488), Alexa Fluor® 546 (sc-74461 AF546), Alexa Fluor® 594 (sc-74461 AF594) or Alexa Fluor® 647 (sc-74461 AF647), 200 µg/ml, for WB (RGB), IF, IHC® (panel) and FCM; and to either Alexa Fluor® 680 (sc-74461 AF680) or Alexa Fluor® 790 (sc-74461 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

AMPKα1/2 (D-6) is recommended for detection of AMPKα1 and AMPKα2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

AMPKα1/2 (D-6) is also recommended for detection of AMPKα1 and AMPKα2 in additional species, including canine.

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Suitable for use as control antibody for AMPKα1/2 siRNA (h): sc-45312, AMPKα1/2 siRNA (m): sc-45313, AMPKα1/2 shRNA (h): sc-45312-SH, AMPKα1/2 shRNA (m): sc-45313-SH, AMPKα1/2 shRNA (h) Lentiviral Particles: sc-45312-V and AMPKα1/2 shRNA (m) Lentiviral Particles: sc-45313-V.

Molecular Weight of AMPKα1/2: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

DATA

AMPKα1/2 (D-6): sc-74461. Western blot analysis of AMPKα1/2 expression in IB4 (A), MCF7 (B), Jurkat (C), Hela (D) and K-562 (E) whole cell lysates.

SELECT PRODUCT CITATIONS


RESEARCH USE

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