

CDKAL1 (D-13): sc-135456

BACKGROUND

Cell cycle progression is controlled, in part, by a family of cyclin dependent kinases (Cdks) that work to phosphorylate key substrates involved in each phase of cell cycle progression. Cdks are the catalytic subunits of serine/threonine protein kinases, a large family of proteins that act as regulators of the eukaryotic cell cycle. CDKAL1 (Cdk5 regulatory subunit associated protein 1-like 1) is a 579 amino acid single-pass membrane protein that contains one TRAM domain and is similar to Cdk5 regulatory subunit associated proteins (CDK5RAPs). Expressed in pancreas, brain and skeletal muscle, CDKAL1 uses iron as a cofactor and is involved in glucose-stimulated Insulin secretion. Defects in the gene encoding CDKAL1 impair Insulin secretion and are associated with the development of type 2 diabetes. Multiple isoforms of CDKAL1 exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: CDKAL1 (human) mapping to 6p22.3; Cdkal1 (mouse) mapping to 13 A3.1.

SOURCE

CDKAL1 (D-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CDKAL1 of rat origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135456 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CDKAL1 (D-13) is recommended for detection of CDKAL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CDKAL1 (D-13) is also recommended for detection of CDKAL1 in additional species, including bovine and porcine.

Suitable for use as control antibody for CDKAL1 siRNA (h): sc-95524, CDKAL1 siRNA (m): sc-142228, CDKAL1 shRNA Plasmid (h): sc-95524-SH, CDKAL1 shRNA Plasmid (m): sc-142228-SH, CDKAL1 shRNA (h) Lentiviral Particles: sc-95524-V and CDKAL1 shRNA (m) Lentiviral Particles: sc-142228-V.

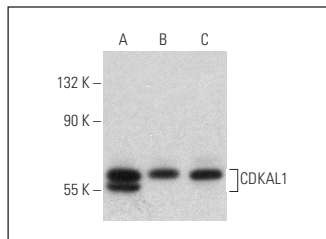
Molecular Weight of CDKAL1: 65 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or U-2 OS cell lysate: sc-2295.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CDKAL1 (D-13): sc-135456. Western blot analysis of CDKAL1 expression in Hep G2 (A), U-2 OS (B) and Jurkat (C) whole cell lysates.

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.

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Try **CDKAL1 (E-9): sc-393447**, our highly recommended monoclonal alternative to CDKAL1 (D-13).