SANTA CRUZ BIOTECHNOLOGY, INC.

CLK1 (N-17): sc-47959

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The CDC-like kinase 1 (CLK1) dually phosphorylates serine- and arginine-rich proteins of the spliceosomal complex, which constitutes a network of regulatory mechanisms that enable SR proteins to control RNA splicing. Specifically, CLK1 may mediate the release of specific proteins from nuclear storage sites. Expression of CLK1 may be very low due to a premature stop codon in the mRNA, which leads to nonsense-mediated mRNA decay. CLK1 activity is positively regulated by phosphorylation on either tyrosine residues or serine/threonine residues. CLK1 activity is negatively regulated by steric constraints mediated by the N-terminal domain and also by phosphorylation on a subset of serine/threonine residues within the catalytic domain.

CHROMOSOMAL LOCATION

Genetic locus: CLK1 (human) mapping to 2q33.1; Clk1 (mouse) mapping to 1 C1.3.

SOURCE

CLK1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CLK1 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-47959 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

CLK1 (N-17) is recommended for detection of CLK1 isoforms Long and Short of mouse and 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 (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).

CLK1 (N-17) is also recommended for detection of CLK1 isoforms Long and Short in additional species, including equine, canine and porcine.

Suitable for use as control antibody for CLK1 siRNA (h): sc-60404, CLK1 siRNA (m): sc-60405, CLK1 shRNA Plasmid (h): sc-60404-SH, CLK1 shRNA Plasmid (m): sc-60405-SH, CLK1 shRNA (h) Lentiviral Particles: sc-60404-V and CLK1 shRNA (m) Lentiviral Particles: sc-60405-V.

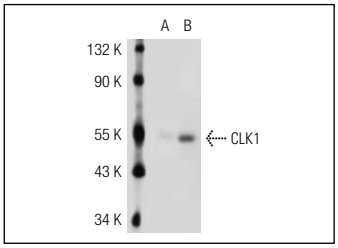
Molecular Weight of CLK1: 57 kDa.

Positive Controls: CLK1 (h): 293T Lysate: sc-113676 or NIH/3T3 whole cell lysate: sc-2210.

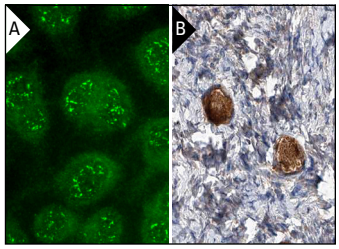
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CLK1 (N-17): sc-47959. Western blot analysis of CLK1 expression in non-transfected: sc-117752 (**A**) and human CLK1 transfected: sc-113676 (**B**) 293T whole cell lysates.



CLK1 (N-17): sc-47959. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear and cytoplasmic staining of follicle cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

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.