SANTA CRUZ BIOTECHNOLOGY, INC.

# CDKL5 (H-299): sc-98567

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin-dependent kinases (Cdks). Cdk proteins work in concert with the cyclins to phosphorylate key substrates involved in each phase of cell cycle progression. Another family of proteins, Cdk inhibitors, also plays a role in regulating the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. CDKL5 (cyclin-dependent kinase-like 5) is a 1,030 amino acid protein that belongs to the CMGC Ser/Thr protein kinase family. Expressed in brain, lung, kidney, prostate, ovary, placenta, pancreas and testis, CDKL5 is thought to play a role in cell cycle regulation. Defects in CDKL5 are a cause of several disorders, such as X-linked infantile spasm syndrome and Rett syndrome.

## REFERENCES


1. Tao, J., et al. 2004. Mutations in the X-linked cyclin-dependent kinase-like 5 (CDKL5/STK9) gene are associated with severe neurodevelopmental retardation. Am. J. Hum. Genet. 75: 1149-1154.
2. Buoni, S., et al. 2006. Myoclonic encephalopathy in the CDKL5 gene mutation. Clin. Neurophysiol. 117: 223-227.


## CHROMOSOMAL LOCATION

Genetic locus: CDKL5 (human) mapping to Xp22.13; Cdkl5 (mouse) mapping to X F4.

## SOURCE

CDKL5 (H-299) is a rabbit polyclonal antibody raised against amino acids 222-520 mapping within an internal region of CDKL5 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.

## APPLICATIONS

CDKL5 (H-299) is recommended for detection of CDKL5 of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CDKL5 (H-299) is also recommended for detection of CDKL5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CDKL5 siRNA (h): sc-72849, CDKL5 siRNA (m): sc-72850, CDKL5 shRNA Plasmid (h): sc-72849-SH, CDKL5 shRNA Plasmid (m): sc-72850-SH, CDKL5 shRNA (h) Lentiviral Particles: sc-72849-V and CDKL5 shRNA (m) Lentiviral Particles: sc-72850-V.

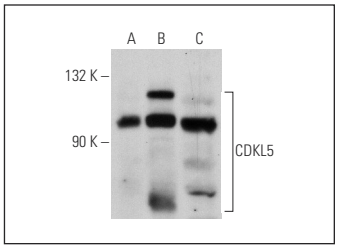
Molecular Weight of CDKL5: 116 kDa.

Positive Controls: CDKL5 (h): 293T Lysate: sc-173758 or HeLa whole cell lysate: sc-2200.

## 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




CDKL5 (H-299): sc-98567. Western blot analysis of CDKL5 expression in non-transfected 293T: sc-117752 (**A**), human CDKL5 transfected 293T: sc-173758 (**B**) and HeLa (**C**) whole cell lysates.

## STORAGE

Store at 4° C, **DO 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.