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 cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Several Cdk proteins have been identified, including Cdk2-Cdk8, PCTAIRE-1–3, PITALRE and PITSLRE. Cdk5 is thought to be involved in the G1/S transition of the cell cycle and is highly expressed in mature neurons. Activity of Cdk5 increases significantly during neuronal differentiation. Cdk5 has been postulated to be a neurofilament or Tau protein kinase, based on its ability to phosphorylate these proteins in vitro.

CHROMOSOMAL LOCATION

Genetic locus: CDK5 (human) mapping to 7q36.1; Cdk5 (mouse) mapping to 5 A3.

SOURCE

Cdk5 (DC 17) is a mouse monoclonal antibody raised against recombinant full length Cdk5 of human origin.

PRODUCT

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdk5 (DC 17) is available conjugated to agarose (sc-249 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

Cdk5 (DC 17) is recommended for detection of Cdk5 of mouse, rat, human and Drosophila melanogaster 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).

Suitable for use as control antibody for Cdk5 siRNA (h): sc-29263, Cdk5 siRNA (m): sc-35047, Cdk5 shRNA Plasmid (h): sc-29263-SH, Cdk5 shRNA Plasmid (m): sc-35047-SH, Cdk5 shRNA (h) Lentiviral Particles: sc-29263-V and Cdk5 shRNA (m) Lentiviral Particles: sc-35047-V.

Molecular Weight of Cdk5: 35 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or SK-BR-3 nuclear extract: sc-2134.

STORAGE

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

PROTOCOLS

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

RESEARCH USE

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

DATA

See Cdk5 (J-3): sc-6247 for Cdk5 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.

SELECT PRODUCT CITATIONS