

# CDK5RAP1 (D-1): sc-398764

## BACKGROUND

Cyclin dependent kinase 5 (Cdk5) is a key regulator of cell cycle progression in neuronal differentiation that physically associates with and is activated by the neuron-specific protein p35. CDK5RAP1 (Cdk5 regulatory subunit-associated protein 1), also known as Cdk5 activator-binding protein C42, is a 601 amino acid protein that specifically inhibits Cdk5 activation by p35 through formation of a dimer that inhibits kinase activity. CDK5RAP1 contains one TRAM domain, which is thought to bind tRNA and deliver the RNA-modifying enzymatic domain to its target. There are four named isoforms of CDK5RAP1 that are produced as a result of alternative splicing events and are expressed at high levels in heart and skeletal muscle.

## REFERENCES

1. Tang, D., et al. 1995. An isoform of the neuronal cyclin-dependent kinase 5 (Cdk5) activator. *J. Biol. Chem.* 270: 26897-26903.
2. Chin, K.T., et al. 1999. Identification and structure characterization of a Cdk inhibitory peptide derived from neuronal-specific Cdk5 activator. *J. Biol. Chem.* 274: 7120-7127.
3. Ching, Y.P., et al. 2000. Cloning of three novel neuronal Cdk5 activator binding proteins. *Gene* 242: 285-294.
4. Wang, X., et al. 2000. Identification of a common protein association region in the neuronal Cdk5 activator. *J. Biol. Chem.* 275: 31763-31769.
5. Ching, Y.P., et al. 2002. Identification of a neuronal Cdk5 activator-binding protein as Cdk5 inhibitor. *J. Biol. Chem.* 277: 15237-15240.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608200. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: CDK5RAP1 (human) mapping to 20q11.21; Cdk5rap1 (mouse) mapping to 2 H1.

## SOURCE

CDK5RAP1 (D-1) is a mouse monoclonal antibody raised against amino acids 200-497 mapping at the C-terminus of CDK5RAP1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CDK5RAP1 (D-1) is available conjugated to agarose (sc-398764 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398764 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398764 PE), fluorescein (sc-398764 FITC), Alexa Fluor® 488 (sc-398764 AF488), Alexa Fluor® 546 (sc-398764 AF546), Alexa Fluor® 594 (sc-398764 AF594) or Alexa Fluor® 647 (sc-398764 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398764 AF680) or Alexa Fluor® 790 (sc-398764 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CDK5RAP1 (D-1) is recommended for detection of CDK5RAP1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CDK5RAP1 siRNA (h): sc-72846, CDK5RAP1 siRNA (m): sc-142226, CDK5RAP1 shRNA Plasmid (h): sc-72846-SH, CDK5RAP1 shRNA Plasmid (m): sc-142226-SH, CDK5RAP1 shRNA (h) Lentiviral Particles: sc-72846-V and CDK5RAP1 shRNA (m) Lentiviral Particles: sc-142226-V.

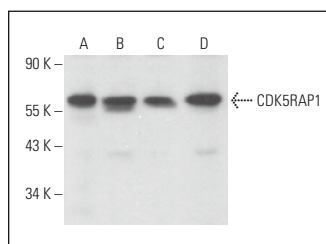
Molecular Weight of CDK5RAP1: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-698-M whole cell lysate: sc-364799 or K-562 whole cell lysate: sc-2203.

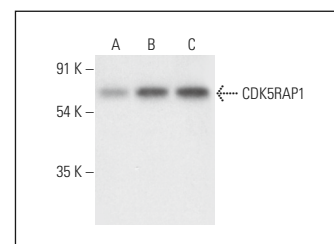
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CDK5RAP1 (D-1): sc-398764. Western blot analysis of CDK5RAP1 expression in HeLa (A), U-698-M (B), MCF7 (C) and 3T3-L1 (D) whole cell lysates.



CDK5RAP1 (D-1): sc-398764. Western blot analysis of CDK5RAP1 expression in PC-3 (A), HeLa (B) and K-562 (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](http://www.scbt.com) for detailed protocols and support products.