SANTA CRUZ BIOTECHNOLOGY, INC.

p35 (C-19): sc-820



BACKGROUND

Cyclin dependent kinase-5 (Cdk5), a key regulator of cell cycle progression, was originally isolated on the basis of its structural homology to Cdc2, a wellcharacterized regulator of cell cycle progression. Although Cdk5 is expressed at the highest level in the brain of adult mice, intermediate levels in testis and low or undetectable levels in all other tissues, brain is the only tissue from which Cdk5 can be isolated as an active kinase. These findings may be explained by the cloning and characterization of a Cdk5 regulatory subunit, designated p35. p35 displays a neuronal cell-specific pattern of expression, physically associates with Cdk5 and activates Cdk5 enzymatic activity. p35 is also expressed in many tissues in a truncated form, designated p25.

CHROMOSOMAL LOCATION

Genetic locus: CDK5R1 (human) mapping to 17q11.2; Cdk5r1 (mouse) mapping to 11 B5.

SOURCE

p35 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of p35 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-820 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p35 (C-19) is recommended for detection of p25 and p35 regulatory subunits of Cdk5 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).

p35 (C-19) is also recommended for detection of p25 and p35 regulatory subunits of Cdk5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p35 siRNA (h): sc-36153, p35 siRNA (m): sc-36154, p35 shRNA Plasmid (h): sc-36153-SH, p35 shRNA Plasmid (m): sc-36154-SH, p35 shRNA (h) Lentiviral Particles: sc-36153-V and p35 shRNA (m) Lentiviral Particles: sc-36154-V.

Molecular Weight of p35 truncated form: 25 kDa.

Molecular Weight of full length p35 precursor: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 nuclear extract: sc-2122 or p35 (h): 293T Lysate: sc-113375.

STORAGE

Store at 4° C, **D0 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.

DATA





p35 (C-19): sc-820. Western blot analysis of p35 expression in non-transfected: sc-117752 (**A**) and human p35 transfected: sc-113375 (**B**) 293T whole cell lysates.

p35 (C-19): sc-820. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- 1. Paglini, G., et al. 1998. Evidence for the participation of the neuron-specific Cdk5 activator p35 during laminin-enhanced axonal growth. J. Neurosci. 18: 9858-9869.
- Liang, B., et al. 2010. Calpain activation promotes BACE1 expression, amyloid precursor protein processing, and amyloid plaque formation in a transgenic mouse model of Alzheimer disease. J. Biol. Chem. 285: 27737-27744.
- 3. Pallari, H.M., et al. 2011. Nestin as a regulator of Cdk5 in differentiating myoblasts. Mol. Biol. Cell 22: 1539-1549.
- Gao, Z. and Godbout, R. 2011. Serine phosphorylation regulates disabled-1 early isoform turnover independently of Reelin. Cell. Signal. 23: 555-565.
- Choy, M.S., et al. 2011. Up-regulation of endoplasmic reticulum stressrelated genes during the early phase of treatment of cultured cortical neurons by the proteasomal inhibitor lactacystin. J. Cell. Physiol. 226: 494-510.
- Crews, L., et al. 2011. Modulation of aberrant CDK5 signaling rescues impaired neurogenesis in models of Alzheimer's disease. Cell Death Dis. 2: e120.
- Mendoza-Naranjo, A., et al. 2012. Fibrillar amyloid-β1-42 modifies actin organization affecting the cofilin phosphorylation state: a role for Rac1/cdc42 effector proteins and the slingshot phosphatase. J. Alzheimers Dis. 29: 63-77.
- Miao, Y., et al. 2012. Involvement of calpain/p35-p25/Cdk5/NMDAR signaling pathway in glutamate-induced neurotoxicity in cultured rat retinal neurons. PLoS ONE 7: e42318.

MONOS Satisfation Guaranteed Try p35 (4G11): sc-293184, our highly recommended monoclonal alternative to p35 (C-19).