SANTA CRUZ BIOTECHNOLOGY, INC.

PCTAIRE-3 (C-17): sc-176

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 cyclins to phosphorylate key substrates involved in cell cycle progression. Another family of proteins, Cdk inhibitors, also play a role in regulating the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Members of the Cdk family include Cdk2-Cdk8, PCTAIRE-1-3, PITALRE and PITSLRE. PCTAIRE-1, PCTAIRE-2 and PCTAIRE-3 comprise a subfamily of Cdc2-related serine/threonine kinases. PCTAIRE-1, which is expressed primarily in mammalian brain, interacts with a variety of proteins, and is thought to be part of a multiple signal transduction cascade. PCTAIRE-2, also with expression in brain, may be important in terminally differentiated neurons. The human PCTAIRE-3 gene maps to chromosome 1q32.1.

CHROMOSOMAL LOCATION

Genetic locus: PCTK3 (human) mapping to 1q32.1; Pctk3 (mouse) mapping to 1 E4.

SOURCE

PCTAIRE-3 (C-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of PCTAIRE-3 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-176 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

PCTAIRE-3 (C-17) is recommended for detection of PCTAIRE-3 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).

PCTAIRE-3 (C-17) is also recommended for detection of PCTAIRE-3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PCTAIRE-3 siRNA (h): sc-37588, PCTAIRE-3 siRNA (m): sc-37589, PCTAIRE-3 shRNA Plasmid (h): sc-37588-SH, PCTAIRE-3 shRNA Plasmid (m): sc-37589-SH, PCTAIRE-3 shRNA (h) Lenti-viral Particles: sc-37588-V and PCTAIRE-3 shRNA (m) Lentiviral Particles: sc-37589-V.

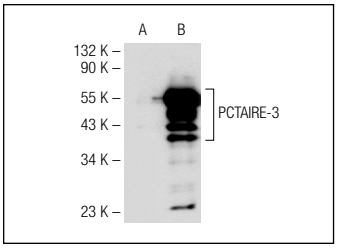
Molecular Weight of PCTAIRE-3: 54 kDa.

Positive Controls: PCTAIRE-3 (h): 293T Lysate: sc-176252 or HL-60 whole cell lysate: sc-2209.

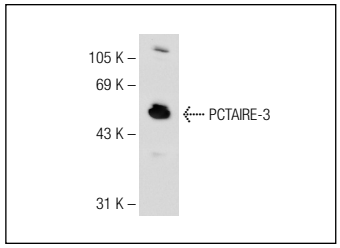
RECOMMENDED SECONDARY REAGENTS

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



PCTAIRE-3 (C-17): sc-176. Western blot analysis of PCTAIRE-3 expression in non-transfected: sc-117752 (**A**) and human PCTAIRE-3 transfected: sc-176252 (**B**) 293T whole cell lysates.



PCTAIRE-3 (C-17): sc-176. Western blot analysis of PCTAIRE-3 expression in 293T whole cell lysate.

SELECT PRODUCT CITATIONS

1. Hirose, T., et al. 1997. PCTAIRE-2, a Cdc2-related serine/threonine kinase, is predominantly expressed in terminally differentiated neurons. Eur. J. Biochem. 249: 481-488.
2. Palmer, K.J., et al. 2005. PCTAIRE protein kinases interact directly with the COPII complex and modulate secretory cargo transport. J. Cell Sci. 118: 3839-3847.
3. van Groen, T. and Kadish, I. 2005. Transgenic AD model mice, effects of potential anti-AD treatments on inflammation and pathology. Brain Res. Brain Res. Rev. 48: 370-378.
4. Chatterjee, S., et al. 2013. Regulation of autophagy in rat hepatocytes treated *in vitro* with low concentration of mercury. Toxicol. Environ. Chem. 95: 504-514.

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.