

PCTAIRE-3 (h): 293T Lysate: sc-176252

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.

REFERENCES

- Okuda, T., et al. 1992. PCTAIRE-1 and PCTAIRE-3, two members of a novel Cdc2/CDC28-related protein kinase gene family. *Oncogene* 7: 2249-2258.
- Okuda, T., et al. 1994. Cloning of genomic loci and chromosomal localization of the human PCTAIRE-1 and -3 protein kinase genes. *Genomics* 21: 217-221.
- Pines, J. 1994. The cell cycle kinases. *Semin. Cancer Biol.* 5: 305-313.
- MacLachlan, T.K., et al. 1995. Cyclins, cyclin-dependent kinases and cdk inhibitors: implications in cell cycle control and cancer. *Crit. Rev. Eukaryot. Gene Expr.* 5: 127-156.
- Siebert, R., et al. 1996. Role of the cyclin-dependent kinase 4 and 6 inhibitor gene family p15, p16, p18 and p19 in leukemia and lymphoma. *Leuk. Lymphoma* 23: 505-520.
- Dirks, P.B., et al. 1997. Current concepts in neuro-oncology: the cell cycle—a review. *Neurosurgery* 40: 1000-1013.
- Sladeczek, F., et al. 1997. The Cdk-like protein PCTAIRE-1 from mouse brain associated with p11 and 14-3-3 proteins. *Mol. Gen. Genet.* 254: 571-577.
- 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.
- Herskovits, A.Z., et al. 2006. The regulation of tau phosphorylation by PCTAIRE-3: implications for the pathogenesis of Alzheimer's disease. *Neurobiol. Dis.* 23: 398-408.

CHROMOSOMAL LOCATION

Genetic locus: CDK18 (human) mapping to 1q32.1.

PRODUCT

PCTAIRE-3 (h): 293T Lysate represents a lysate of human PCTAIRE-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

PCTAIRE-3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PCTAIRE-3 antibodies. Recommended use: 10-20 µl per lane.

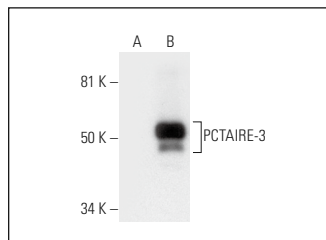
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PCTAIRE-3 (H-4): sc-393262 is recommended as a positive control antibody for Western Blot analysis of enhanced human PCTAIRE-3 expression in PCTAIRE-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



PCTAIRE-3 (H-4): sc-393262. 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.

RESEARCH USE

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

PROTOCOLS

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