

PFTAIRE-1 (Q-13): sc-55738

BACKGROUND

In vertebrates, as in yeast, multiple cyclins have been identified, including a total of eight such regulatory proteins in mammals. In contrast to the situation in yeast, the Cdc2 p34 kinase is not the only catalytic subunit identified in vertebrates that can interact with cyclins. Several additional Cdc2 p34-related cyclin dependent kinases have been identified. These include Cdk3, Cdk4, Cdk5, Cdk6, Cdk7, Cdk8, PCTAIRE-1, PCTAIRE-2, PCTAIRE-3, PFTAIRE-1 and KKIALRE. PFTAIRE-1 demonstrates distribution in the cytoplasm of HeLa cells in spite of its two N-terminal nuclear localization sequences.

REFERENCES

- Lazzaro, MA., et al. 1997. Chromosomal mapping of the PFTAIRE gene, Pftk1, a Cdc2-related kinase expressed predominantly in the mouse nervous system. *Genomics* 42: 536-537.
- Lazzaro, MA., et al. 1997. A novel Cdc2-related protein kinase expressed in the nervous system. *J. Neurochem.* 69: 348-364.
- Beset, V., et al. 1998. The identification and characterization of expression of PFTAIRE-1, a novel Cdk family member, suggest its function in the mouse testis and nervous system. *Mol. Reprod. Dev.* 50: 18-29.
- Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 5: 355-364.
- Yang, T., et al. 2001. Identification and cellular localization of human PFTAIRE-1. *Gene* 267: 165-172.
- Hashida, T., et al. 2002. A novel TRH-PFTAIRE protein kinase 1 pathway in the cerebellum: subtractive hybridization analysis of TRH-deficient mice. *Endocrinology* 143: 2808-2811.
- Rasclé, A., et al. 2003. L63, the *Drosophila* PFTAIRE, interacts with two novel proteins unrelated to cyclins. *Mech. Dev.* 120: 617-628.
- Gao, Y., et al. 2006. A Cdc2-related protein kinase hPFTAIRE1 from human brain interacting with 14-3-3 proteins. *Cell Res.* 16: 539-547.
- Tang, X., et al. 2006. An RNA interference-based screen identifies MAP4K4/NIK as a negative regulator of PPAR γ , adipogenesis, and Insulin-responsive hexose transport. *Proc. Natl. Acad. Sci. USA* 103: 2087-2092.

CHROMOSOMAL LOCATION

Genetic locus: CDK14 (human) mapping to 7q21.13; Cdk14 (mouse) mapping to 5 A1.

SOURCE

PFTAIRE-1 (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PFTAIRE-1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55738 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-55738 X, 200 μ g/0.1 ml.

APPLICATIONS

PFTAIRE-1 (Q-13) is recommended for detection of PFTAIRE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PFTAIRE-1 (Q-13) is also recommended for detection of PFTAIRE-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PFTAIRE-1 siRNA (h): sc-62779, PFTAIRE-1 siRNA (m): sc-62780, PFTAIRE-1 shRNA Plasmid (h): sc-62779-SH, PFTAIRE-1 shRNA Plasmid (m): sc-62780-SH, PFTAIRE-1 shRNA (h) Lentiviral Particles: sc-62779-V and PFTAIRE-1 shRNA (m) Lentiviral Particles: sc-62780-V.

PFTAIRE-1 (Q-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PFTAIRE-1: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.