

PFTAIRE-1 (C-3): sc-376366

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.

CHROMOSOMAL LOCATION

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

SOURCE

PFTAIRE-1 (C-3) is a mouse monoclonal antibody raised against amino acids 1-140 mapping at the N-terminus of PFTAIRE-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376366 X, 200 µg/0.1 ml.

PFTAIRE-1 (C-3) is available conjugated to agarose (sc-376366 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376366 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376366 PE), fluorescein (sc-376366 FITC), Alexa Fluor® 488 (sc-376366 AF488), Alexa Fluor® 546 (sc-376366 AF546), Alexa Fluor® 594 (sc-376366 AF594) or Alexa Fluor® 647 (sc-376366 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376366 AF680) or Alexa Fluor® 790 (sc-376366 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PFTAIRE-1 (C-3) is recommended for detection of PFTAIRE-1 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), immunohistochemistry (including paraffin-embedded sections) (start-ing 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 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 (C-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

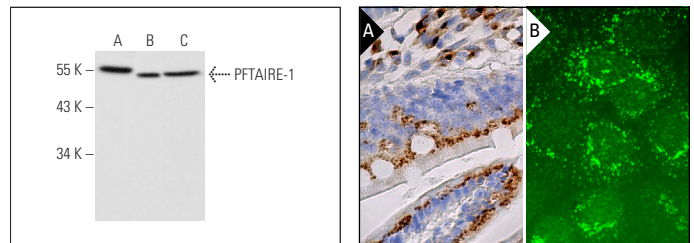
Molecular Weight of PFTAIRE-1: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PFTAIRE-1 (C-3): sc-376366. Western blot analysis of PFTAIRE-1 expression in Hep G2 (A), HL-60 (B) and Jurkat (C) whole cell lysates.

PFTAIRE-1 (C-3): sc-376366. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic vesicles localization (B).

SELECT PRODUCT CITATIONS

- Ferguson, F.M., et al. 2019. Discovery of covalent CDK14 inhibitors with pan-TAIRE family specificity. *Cell Chem. Biol.* 26: 804-817.e12.
- Molinas, A., et al. 2021. The candidate IBD risk gene CCNY is dispensable for intestinal epithelial homeostasis. *Cells* 10: 2330.
- Piao, H.Y., et al. 2022. Hypoxia associated lncRNA HYPAL promotes proliferation of gastric cancer as ceRNA by sponging miR-431-5p to upregulate CDK14. *Gastric Cancer* 25: 44-63.
- Sanchez, L., et al. 2022. MicroRNA-dependent suppression of biological pacemaker activity induced by TBX18. *Cell Rep. Med.* 3: 100871.

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 for detailed protocols and support products.

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