SANTA CRUZ BIOTECHNOLOGY, INC.

Pirh2 (D-12): sc-374505

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pirh2, also known as androgen receptor N-terminal-interacting protein (ARNIP), ZN363 or CHIMP, has p53-induced ubiquitin-protein ligase activity, promoting p53 degradation. The protein physically interacts with p53 and the resulting degradation of p53 renders Pirh2 an oncogenic protein as the loss of p53 function contributes to malignant tumor development. The gene encoding for the protein maps to chromosome 4q21.1 and transcription of this gene is regulated by p53. Pirh2 expression decreases the level of p53 and a decrease of endogenous Pirh2 expression ups p53 levels. Pirh2 is therefore considered, together with MDM2, to be acting as a negative regulator of p53 function.

REFERENCES

1. Beitel, L.K., et al. 2002. Cloning and characterization of an androgen receptor N-terminal-interacting protein with ubiquitin-protein ligase activity. J. Mol. Endocrinol. 29: 41-60.
2. Leng, R.P., et al. 2003. Pirh2, a p53-induced ubiquitin-protein ligase, promotes p53 degradation. Cell 112: 779-791.
3. Duan, W., et al. 2004. Expression of Pirh2, a newly identified ubiquitin protein ligase, in lung cancer. J. Natl. Cancer Inst. 96: 1718-1721.
4. Corcoran, C.A., et al. 2004. The p53 paddy wagon: COP1, Pirh2 and MDM2 are found resisting apoptosis and growth arrest. Cancer Biol. Ther. 3: 721-725.
5. Dornan, D., et al. 2004. The ubiquitin ligase COP1 is a critical negative regulator of p53. Nature 429: 86-92.

CHROMOSOMAL LOCATION

Genetic locus: RCHY1 (human) mapping to 4q21.1; Rchy1 (mouse) mapping to 5 E2.

SOURCE

Pirh2 (D-12) is a mouse monoclonal antibody raised against a peptide mapping within an internal region of Pirh2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-374505 X, 200 µg/0.1 ml.

Pirh2 (D-12) is available conjugated to agarose (sc-374505 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374505 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374505 PE), fluorescein (sc-374505 FITC), Alexa Fluor® 488 (sc-374505 AF488), Alexa Fluor® 546 (sc-374505 AF546), Alexa Fluor® 594 (sc-374505 AF594) or Alexa Fluor® 647 (sc-374505 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374505 AF680) or Alexa Fluor® 790 (sc-374505 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374505 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pirh2 (D-12) is recommended for detection of Pirh2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

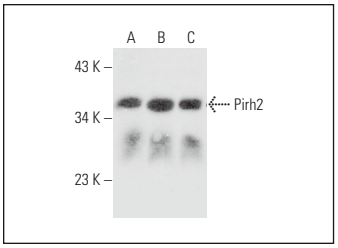
Suitable for use as control antibody for Pirh2 siRNA (h): sc-45424, Pirh2 siRNA (m): sc-45425, Pirh2 shRNA Plasmid (h): sc-45424-SH, Pirh2 shRNA Plasmid (m): sc-45425-SH, Pirh2 shRNA (h) Lentiviral Particles: sc-45424-V and Pirh2 shRNA (m) Lentiviral Particles: sc-45425-V.

Pirh2 (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

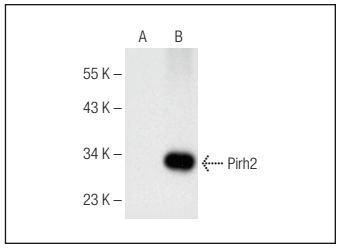
Molecular Weight of Pirh2: 30 kDa.

Positive Controls: Pirh2 (m2): 293T Lysate: sc-122593, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

DATA



Pirh2 (D-12): sc-374505. Western blot analysis of Pirh2 expression in HeLa nuclear extract (**A**) and HeLa (**B**) and MCF7 (**C**) whole cell lysates.



Pirh2 (D-12): sc-374505. Western blot analysis of Pirh2 expression in non-transfected: sc-117752 (**A**) and mouse Pirh2 transfected: sc-122593 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, H., et al. 2022. Destabilization of TP53 by USP10 is essential for neonatal autophagy and survival. Cell Rep. 41: 111435.
2. Wang, X., et al. 2023. Dihydroartemisinin synergistically enhances the cytotoxic effects of oxaliplatin in colon cancer by targeting the PHB2-RCHY1 mediated signaling pathway. Mol. Carcinog. 62: 293-302.

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.