SANTA CRUZ BIOTECHNOLOGY, INC.

p15 INK4B (D-12): sc-271791

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The normal progression of cells through the cell cycle is under the control of the cyclin dependent protein kinases Cdk4 and Cdk6, which are subject to inhibition by the mitotic inhibitory protein, p16 INK4A. An isolated member of the p16 INK4A family has been designated p15 INK4B (also designated, p15, INK4B, CDK4I, TP15, or MTS2). p15 INK4B expression is upregulated approximately 30-fold in TGFβ-treated human keratinocytes, suggesting that p15 INK4B may act as an effector of TGFβ-mediated cell cycle arrest. The gene encoding p15 INK4B (CDKN2B) has been mapped to chromosome 9p21.3 at a position adjacent to the p16 INK4A gene at a site of frequent chromosomal abnormality in human tumors. It has been suggested that p15 INK4B may function as an effector of TGFβ-mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinases.

CHROMOSOMAL LOCATION

Genetic locus: CDKN2B (human) mapping to 9p21.3.

SOURCE

p15 INK4B (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 103-137 at the C-terminus of p15 INK4B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p15 INK4B (D-12) is available conjugated to agarose (sc-271791 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271791 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271791 PE), fluorescein (sc-271791 FITC), Alexa Fluor® 488 (sc-271791 AF488), Alexa Fluor® 546 (sc-271791 AF546), Alexa Fluor® 594 (sc-271791 AF594) or Alexa Fluor® 647 (sc-271791 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271791 AF680) or Alexa Fluor® 790 (sc-271791 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271791 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p15 INK4B (D-12) is recommended for detection of p15 INK4B of 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 p15 INK4B siRNA (h): sc-37624, p15 INK4B shRNA Plasmid (h): sc-37624-SH and p15 INK4B shRNA (h) Lentiviral Particles: sc-37624-V.

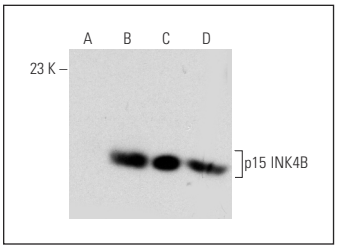
Molecular Weight of p15 INK4B: 15 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or p15 INK4B (h): 293T Lysate: sc-129373.

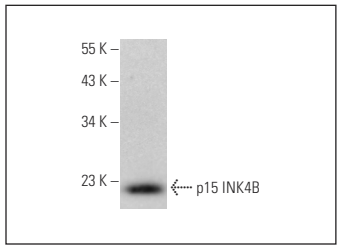
STORAGE

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

DATA



p15 INK4B (D-12): sc-271791. Western blot analysis of p15 INK4B expression in non-transfected 293T: sc-117752 (**A**), human p15 INK4B transfected 293T: sc-129373 (**B**), A549 (**C**) and HeLa (**D**) whole cell lysates.



p15 INK4B (D-12): sc-271791. Western blot analysis of p15 INK4B expression in Caco-2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Fecker, L.F., et al. 2011. Efficient melanoma cell killing and reduced melanoma growth in mice by a selective replicating adenovirus armed with tumor necrosis factor-related apoptosis-inducing ligand. Hum. Gene Ther. 22: 405-417.
2. Gao, R., et al. 2013. Depletion of histone demethylase KDM2A inhibited cell proliferation of stem cells from apical papilla by de-repression of $p15^{INK4B}$ and $p27^{Kip1}$. Mol. Cell. Biochem. 379: 115-122.
3. Li, X., et al. 2015. Interruption of KLF5 acetylation converts its function from tumor suppressor to tumor promoter in prostate cancer cells. Int. J. Cancer 136: 536-546.
4. Chan, D.W., et al. 2017. DLX1 acts as a crucial target of FOXM1 to promote ovarian cancer aggressiveness by enhancing TGF-β/Smad4 signaling. Oncogene 36: 1404-1416.
5. Testa, J.R., et al. 2021. Somatic epigenetic silencing of RIPK3 inactivates necroptosis and contributes to chemoresistance in malignant mesothelioma. Clin. Cancer Res. 27: 1200-1213.
6. Yasuda, T., et al. 2021. Inflammation-driven senescence-associated secretory phenotype in cancer-associated fibroblasts enhances peritoneal dissemination. Cell Rep. 34: 108779.
7. Sun, W., et al. 2022. RUNX1 overexpression triggers TGF-β signaling to upregulate p15 and thereby blocks early hematopoiesis by inducing cell cycle arrest. Stem Cell Res. 60: 102694.
8. Komori, T., et al. 2023. A CRISPR-del-based pipeline for complete gene knockout in human diploid cells. J. Cell Sci. 136: jcs260000.

RESEARCH USE

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