

p15 INK4B (DCS114.1): sc-65223

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 TGF β -treated human keratinocytes, suggesting that p15 INK4B may act as an effector of TGF β -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 TGF β -mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinases.

REFERENCES

- Hannon, G.J., et al. 1994. p15 INK4B is a potential effector of TGF β -induced cell cycle arrest. *Nature* 371: 257-261.
- Kamb, A., et al. 1994. A cell cycle regulator potentially involved in genesis of many tumor types. *Science* 264: 436-440.
- Reynisdóttir, I., et al. 1997. The subcellular locations of p15 INK4B and p27^{Kip1} coordinate their inhibitory interactions with Cdk4 and Cdk2. *Genes Dev.* 11: 492-503.
- Chen, H., et al. 2002. Hypermethylation of the p15 INK4B gene in acute leukemia and myelodysplastic syndromes. *Chin. Med. J.* 115: 987-990.
- Kiyota, A., et al. 2002. Anti-epidermal growth factor receptor monoclonal and p15 INK4B and induces G₁ arrest in oral squamous carcinoma cell lines. *Oncology* 63: 92-98.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600431. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Huang, W., et al. 2005. Histone deacetylase 3 represses p15 INK4B and p21^{WAF1/Cip1} transcription by interacting with Sp1. *Biochem. Biophys. Res. Commun.* 339: 165-171.
- Hutter, G., et al. 2005. Differential effect of epigenetic alterations and genomic deletions of Cdk inhibitors (p16 INK4A, p15 INK4B, p14 ARF) in mantle cell lymphoma. *Genes Chromosomes Cancer* 45: 203-210.

CHROMOSOMAL LOCATION

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

SOURCE

p15 INK4B (DCS114.1) is a mouse monoclonal antibody raised against his-tagged recombinant full length p15 INK4B protein of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p15 INK4B (DCS114.1) is recommended for detection of p15 INK4B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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, JAR cell lysate: sc-2276 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

- Kim, R.H., et al. 2010. Bmi-1 extends the life span of normal human oral keratinocytes by inhibiting the TGF- β signaling. *Exp. Cell Res.* 316: 2600-2608.
- Heo, S.H., et al. 2017. Knockout of Krüppel-like factor 10 suppresses hepatic cell proliferation in a partially hepatectomized mouse model. *Oncol. Lett.* 13: 4843-4848.

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.



See **p15 INK4B/p16 INK4A (C-7): sc-377412** for p15 INK4B/p16 INK4A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.