SANTA CRUZ BIOTECHNOLOGY, INC.

p33ING1 (CAb 9): sc-21729

BACKGROUND

The gene ING1 encodes a protein that was found to be mutated or have reduced expression in several tumor cell lines, suggesting a role for this protein as a tumor suppressor. The gene maps to a chromosome region which is known to be frequently rearranged in gastric cancers and head and neck squamous carcinomas. Overexpression of ING1 p33 in various cell lines inhibits cell proliferation and increases programmed cell death in the absence of survival factors. ING1 p33 is located in the nucleus where it cooperates with the tumor supressor p53 to induce growth arrest by directly associating with p53 and modulating its transcriptional activity. ING1 p33 is required for p53 mediated negative regulation of cell proliferation and may also be required for other p53 dependent cellular processes, including programmed cell death.

REFERENCES

1. Garkavtsev, I., et al. 1996. Suppression of the novel growth inhibitor p33ING1 promotes neoplastic transformation. Nat. Genet. 14: 415-420.
2. Zeremski, M., et al. 1997. Localization of the candidate tumor suppressor gene ING1 to human chromosome 13q34. Somat. Cell Mol. Genet. 23: 233-236.
3. Garkavtsev, I., et al. 1997. Cellular localization and chromosome mapping of a novel candidate tumor suppressor gene (ING1). Cytogenet. Cell Genet. 76: 176-178.
4. Oren, M. 1998. Tumor suppressors. Teaming up to restrain cancer. Nature 391: 233-234.
5. Garkavtsev, I., et al. 1998. The candidate tumor suppressor p33ING1 cooperates with p53 in cell growth control. Nature 391: 295-298.
6. Vieyra, D., et al. 2003. Altered subcellular localization and low frequency of mutations of ING1 in human brain tumors. Clin. Cancer Res. 9: 5952-5961.
7. Hara, Y., et al. 2003. ING1 and p53 tumor suppressor gene alterations in adenocarcinomas of the esophagogastric junction. Cancer Lett. 192: 109-116..

CHROMOSOMAL LOCATION

Genetic locus: ING1 (human) mapping to 13q34.

SOURCE

p33ING1 (CAb 9) is a mouse monoclonal antibody raised against recombinant GST-p33ING1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

p33ING1 (CAb 9) is recommended for detection of p33ING1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ING1 siRNA (h): sc-36152, ING1 shRNA Plasmid (h): sc-36152-SH and ING1 shRNA (h) Lentiviral Particles: sc-36152-V.

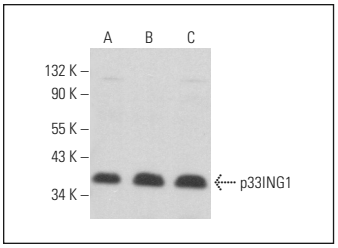
Molecular Weight of p33ING1: 34 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MOLT-4 cell lysate: sc-2233 or IMR-32 nuclear extract: sc-2148.

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.

DATA



p33ING1 (CAb 9): sc-21729. Western blot analysis of p33ING1 expression in IMR-32 nuclear extract (**A**) and Jurkat (**B**) and MOLT-4 (**C**) whole cell lysates.

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.