SANTA CRUZ BIOTECHNOLOGY, INC.

ING1 (E-2): sc-374295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ING1 (inhibitor of growth protein 1) is a 422 amino acid protein encoded by the human gene ING1. ING1 belongs to the ING family and contains one PHD-type zinc finger. ING1 cooperates with p53/TP53 in the negative regulatory pathway of cell growth by modulating p53-dependent transcriptional activation. Implicated as a tumor suppressor gene, ING1 is a nuclear protein with several known isoforms, three of which are designated $p47^{ING1}$ (ING1 precursor), $p33^{ING1}$ and $p24^{ING1}$, whose expression varies per tissue. The $p33^{ING1}$ isoform is expressed in all normal tissues and cells, while the $p24^{ING1}$ isoform is expressed in testis, liver, and kidney, and is weakly expressed in colon and brain, but not in breast or cultured melanocytes.

REFERENCES

1. Garkavtsev, I., et al. 1996. Suppression of the novel growth inhibitor $p33^{ING1}$ 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 $p33^{ING1}$ cooperates with p53 in cell growth control. Nature 391: 295-298.
6. Shinoura, N., et al. 1999. Adenovirus-mediated transfer of $p33^{ING1}$ with p53 drastically augments apoptosis in gliomas. Cancer Res. 59: 5521-5528.
7. Cheung, K.J., et al. 2002. The tumour suppressor p33ING1 does not enhance camptothecin-induced cell death in melanoma cells. Int. J. Oncol. 20: 1319-1322.
8. Tallen, G., et al. 2003. Expression of p33ING1 mRNA and chemosensitivity in brain tumor cells. Anticancer Res. 23: 1631-1635.

CHROMOSOMAL LOCATION

Genetic locus: ING1 (human) mapping to 13q34; Ing1 (mouse) mapping to 8 A1.1.

SOURCE

ING1 (E-2) is a mouse monoclonal antibody raised against amino acids 244-319 of ING1 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

ING1 (E-2) is recommended for detection of ING1 isoforms 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 ING1 siRNA (h): sc-36152, ING1 siRNA (m): sc-36151, ING1 shRNA Plasmid (h): sc-36152-SH, ING1 shRNA Plasmid (m): sc-36151-SH, ING1 shRNA (h) Lentiviral Particles: sc-36152-V and ING1 shRNA (m) Lentiviral Particles: sc-36151-V.

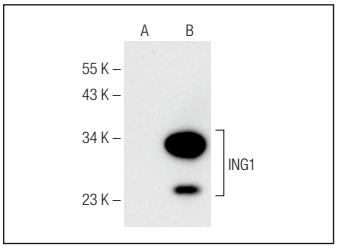
Molecular Weight of ING1 isoforms 1/2/3: 47/32/23 kDa.

Positive Controls: ING1 (m): 293T Lysate: sc-122316, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

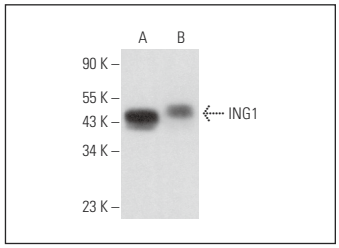
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ING1 (E-2): sc-374295. Western blot analysis of ING1 expression in non-transfected: sc-117752 (**A**) and mouse ING1 transfected: sc-122316 (**B**) 293T whole cell lysates.



ING1 (E-2): sc-374295. Western blot analysis of ING1 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Esmaeili, M., et al. 2016. A novel crosstalk between the tumor suppressors ING1 and ING2 regulates androgen receptor signaling. J. Mol. Med. 94: 1167-1179.

RESEARCH USE

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