SANTA CRUZ BIOTECHNOLOGY, INC.

ING1 (E-10): sc-373817

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 p47ING1 (ING1 precursor), p33ING1 and p24ING1, whose expression varies per tissue. The p33ING1 isoform is expressed in all normal tissues and cells, while the p24ING1 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. Tachibana, M., et al. 2004. Dysfunction of p53 pathway in human colorectal cancer: analysis of p53 gene mutation and the expression of the p53-associated factors p14ARF, p33ING1, p21WAF1 and MDM2. Int. J. Oncol. 25: 913-920.

CHROMOSOMAL LOCATION

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

SOURCE

ING1 (E-10) is a mouse monoclonal antibody raised against amino acids 331-442 mapping at the C-terminus 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.

ING1 (E-10) is available conjugated to agarose (sc-373817 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373817 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373817 PE), fluorescein (sc-373817 FITC), Alexa Fluor® 488 (sc-373817 AF488), Alexa Fluor® 546 (sc-373817 AF546), Alexa Fluor® 594 (sc-373817 AF594) or Alexa Fluor® 647 (sc-373817 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373817 AF680) or Alexa Fluor® 790 (sc-373817 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ING1 (E-10) is recommended for detection of ING1 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.

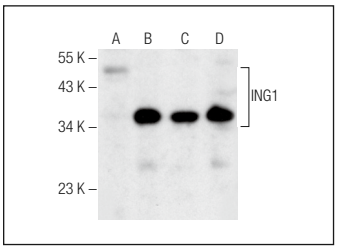
Molecular Weight of ING1 isoforms 1/2/3: 47/32/23 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MOLT-4 nuclear extract: sc-2151 or ING1 (m): 293T Lysate: sc-122316.

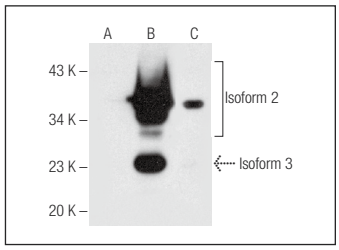
RECOMMENDED SUPPORT REAGENTS

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-10): sc-373817. Western blot analysis of ING1 expression in A-673 (**A**), K-562 (**B**), MOLT-4 (**C**) and CCRF-CEM (**D**) nuclear extracts.



ING1 (E-10): sc-373817. Western blot analysis of ING1 expression in non-transfected: sc-117752 (**A**) and mouse ING1 transfected: sc-122316 (**B**) 293T whole cell lysates and K-562 nuclear extract (**C**).

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.

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