

ING2 (B-5): sc-271544

BACKGROUND

ING2 (inhibitor of growth protein 2, p33^{ING2}) is a 280 amino acid protein encoded by the human gene ING2. ING2 belongs to the ING family and contains one PHD-type zinc finger. ING2 is believed to be involved in p53/TP53 activation and p53/TP53-dependent apoptotic pathways, probably by enhancing acetylation of p53/TP53. It is a component of a MSinA-like corepressor complex, which is probably involved in deacetylation of nucleosomal histones. ING2 activity seems to be modulated by binding to phosphoinositides (PtdInsPs). ING2 is predominantly a nuclear protein that is localized to chromatin and the nuclear matrix. Upon reduced PtdIns(5)P levels, ING2 seems to be released from chromatin and, at least partially, translocated to the cytoplasm. ING2 is widely expressed with higher expression in colon-cancer tumor than in normal colon tissues. It can also be induced by the DNA-damaging agents etoposide and neocarzinostatin.

REFERENCES

1. Shimada, Y., et al. 1999. Cloning of a novel gene (ING1L) homologous to ING1, a candidate tumor suppressor. *Cytogenet. Cell Genet.* 83: 232-235.
2. Nagashima, M., et al. 2001. DNA damage-inducible gene p33^{ING2} negatively regulates cell proliferation through acetylation of p53. *Proc. Natl. Acad. Sci. USA* 98: 9671-9676.
3. Kuzmichev, A., et al. 2002. Role of the Sin3-histone deacetylase complex in growth regulation by the candidate tumor suppressor p33^{ING1}. *Mol. Cell Biol.* 22: 835-848.
4. Nagashima, M., et al. 2003. A novel PHD-finger motif protein, p47^{ING3}, modulates p53-mediated transcription, cell cycle control, and apoptosis. *Oncogene* 22: 343-350.
5. Gozani, O., et al. 2003. The PHD finger of the chromatin-associated protein ING2 functions as a nuclear phosphoinositide receptor. *Cell* 114: 99-111.

CHROMOSOMAL LOCATION

Genetic locus: ING2 (human) mapping to 4q35.1.

SOURCE

ING2 (B-5) is a mouse monoclonal antibody raised against amino acids 111-181 mapping within an internal region of ING2 of human origin.

PRODUCT

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

ING2 (B-5) is available conjugated to agarose (sc-271544 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271544 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271544 PE), fluorescein (sc-271544 FITC), Alexa Fluor® 488 (sc-271544 AF488), Alexa Fluor® 546 (sc-271544 AF546), Alexa Fluor® 594 (sc-271544 AF594) or Alexa Fluor® 647 (sc-271544 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271544 AF680) or Alexa Fluor® 790 (sc-271544 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ING2 (B-5) is recommended for detection of inhibitor of growth protein 2 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 ING2 siRNA (h): sc-62503, ING2 shRNA Plasmid (h): sc-62503-SH and ING2 shRNA (h) Lentiviral Particles: sc-62503-V.

Molecular Weight of ING2: 33 kDa.

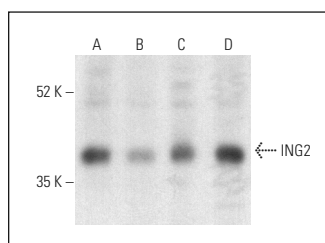
Positive Controls: HT-1080 whole cell lysate: sc-364183, Hep G2 cell lysate: sc-2227 or Ramos cell lysate: sc-2216.

RECOMMENDED SUPPORT REAGENTS

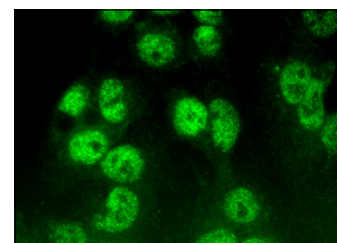
To ensure optimal results, the following support reagents are recommended:

- 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



ING2 (B-5): sc-271544. Western blot analysis of ING2 expression in Ramos (A), HT-1080 (B), Hep G2 (C) and HEL 92.1.7 (D) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



ING2 (B-5): sc-271544. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

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.