

ING2 (S-20): sc-67646

BACKGROUND

ING2 (inhibitor of growth protein 2, p33ING2) 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 p33ING2 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, p47ING3, 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; Ing2 (mouse) mapping to 8 B1.1.

SOURCE

ING2 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ING2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67646 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ING2 (S-20) is recommended for detection of inhibitor of growth protein 2 of mouse, rat and 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)], 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).

ING2 (S-20) is also recommended for detection of inhibitor of growth protein 2 in additional species, including porcine.

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.

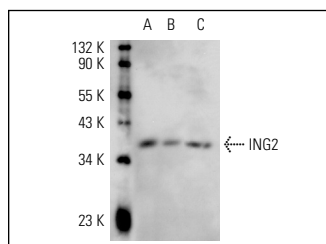
Molecular Weight of ING2: 33 kDa.

Positive Controls: HL-60 + etoposide whole cell lysate, MCF7 + etoposide whole cell lysate or HeLa + etoposide whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ING2 (S-20): sc-67646. Western blot analysis of ING2 expression in etoposide-treated HL-60 (A), etoposide-treated MCF7 (B) and etoposide-treated HeLa (C) whole cell lysates.

RESEARCH USE

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



Try **ING2 (B-5): sc-271544**, our highly recommended monoclonal alternative to ING2 (S-20).