

ING4 (T-15): sc-50004

BACKGROUND

Inhibitor of growth protein (ING) family of nuclear proteins, also designated ING tumor suppressor proteins, inhibit tumor progression by modulating the transcriptional outputs of signaling pathways, which in turn regulates cell proliferation. Members of this family include ING1, ING2, ING3, ING4 and ING5. ING4 localizes to the nucleus and may inhibit tumor progression by adjusting the transcriptional output of signaling pathways which regulate cell proliferation. When complexed with RELA, ING4 can suppress brain tumor angiogenesis through transcriptional repression of RELA/NFKB3 target genes. ING4 interacts with HIF prolyl hydroxylase 2 (EGLN1), which represses the activity of hypoxia inducible factor (HIF).

REFERENCES

- Shiseki, M., et al. 2003. p29ING4 and p28ING5 bind to p53 and p300 and enhance p53 activity. *Cancer Res.* 63: 2373-2378.
- Kim, S., et al. 2004. A screen for genes that suppress loss of contact inhibition of ING4 as a candidate tumor suppressor gene in human cancer. *Proc. Natl. Acad. Sci. USA* 101: 16251-16256.
- Zhang, X., et al. 2004. ING4 induces G₂/M cell cycle arrest and enhances the chemosensitivity to DNA-damage agents in Hep G2 cells. *FEBS Lett.* 570: 7-12.
- Garkavtsev, I., et al. 2004. The candidate tumour suppressor protein ING4 regulates brain tumour growth and angiogenesis. *Nature* 428: 328-332.

CHROMOSOMAL LOCATION

Genetic locus: ING4 (human) mapping to 12p13.31; Ing4 (mouse) mapping to 6 F2.

SOURCE

ING4 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ING4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50004 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

ING4 (T-15) is recommended for detection of ING4 isoforms 1 and 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).

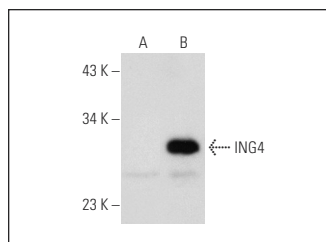
ING4 (T-15) is also recommended for detection of ING4 isoforms 1 and 2 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ING4 siRNA (h): sc-60850, ING4 siRNA (m): sc-60851, ING4 shRNA Plasmid (h): sc-60850-SH, ING4 shRNA Plasmid (m): sc-60851-SH, ING4 shRNA (h) Lentiviral Particles: sc-60850-V and ING4 shRNA (m) Lentiviral Particles: sc-60851-V.

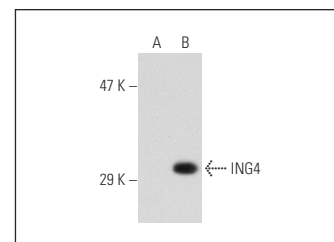
Molecular Weight of ING4: 29 kDa.

Positive Controls: ING4 (h): 293T Lysate: sc-111547 or ING4 (m): 293T Lysate: sc-121066.

DATA



ING4 (T-15): sc-50004. Western blot analysis of ING4 expression in non-transfected: sc-117752 (A) and human ING4 transfected: sc-111547 (B) 293T whole cell lysates.



ING4 (T-15): sc-50004. Western blot analysis of ING4 expression in non-transfected: sc-117752 (A) and mouse ING4 transfected: sc-121066 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wei, Q., et al. 2012. Effect of the tumor suppressor gene ING4 on the proliferation of MCF-7 human breast cancer cells. *Oncol. Lett.* 4: 438-442.
- Han, X., et al. 2014. Destabilizing LSD1 by Jade-2 promotes neurogenesis: an antibraking system in neural development. *Mol. Cell* 55: 482-494.
- Yan, R., et al. 2015. SCF(JFK) is a bona fide E3 ligase for ING4 and a potent promoter of the angiogenesis and metastasis of breast cancer. *Genes Dev.* 29: 672-685.
- Zhang, H., et al. 2016. Synergistic tumor suppression by adenovirus-mediated ING4/PTEN double gene therapy for gastric cancer. *Cancer Gene Ther.* 23: 13-23.

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Try **ING4 (A-8): sc-376122** or **ING4 (60.86): sc-135742**, our highly recommended monoclonal alternatives to ING4 (T-15).