

# ING5 (16.3): sc-135744

## 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, ING5 and INGX. ING5 (inhibitor of growth family, member 5), also known as p28ING5, is a 240 amino acid nuclear protein containing a single PHD-type zinc finger, a common motif found in proteins involved in chromatin remodeling. Through chromatin acetylation, ING5 may regulate DNA replication and may function as a transcriptional coactivator. ING5 also acts as a tumor suppressor that interacts with p53, inhibits cell growth and induces apoptosis. ING5 is expressed as two isoforms produced by alternative splicing events and is encoded by a gene located on human chromosome 2.

## REFERENCES

- Shiseki, M., et al. 2003. p29ING4 and p28ING5 bind to p53 and p300, and enhance p53 activity. *Cancer Res.* 63: 2373-2378.
- Gong, W., et al. 2005. Function of the ING family of PHD proteins in cancer. *Int. J. Biochem. Cell Biol.* 37: 1054-1065.
- He, G.H., et al. 2005. Phylogenetic analysis of the ING family of PHD finger proteins. *Mol. Biol. Evol.* 22: 104-116.
- Doyon, Y., et al. 2006. ING tumor suppressor proteins are critical regulators of chromatin acetylation required for genome expression and perpetuation. *Mol. Cell* 21: 51-64.
- Soliman, M.A. and Riabowol, K. 2007. After a decade of study-ING, a PHD for a versatile family of proteins. *Trends Biochem. Sci.* 32: 509-519.
- Gordon, P.M., et al. 2008. Interspecies data mining to predict novel ING-protein interactions in human. *BMC Genomics* 9: 426.
- Champagne, K.S., et al. 2008. The crystal structure of the ING5 PHD finger in complex with an H3K4me3 histone peptide. *Proteins* 72: 1371-1376.
- Shah, S., et al. 2009. ING function in apoptosis in diverse model systems. *Biochem. Cell Biol.* 87: 117-125.
- Unoki, M., et al. 2009. Reviewing the current classification of inhibitor of growth family proteins. *Cancer Sci.* 100: 1173-1179.

## CHROMOSOMAL LOCATION

Genetic locus: ING5 (human) mapping to 2q37.3.

## SOURCE

ING5 (16.3) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 57-67 of ING5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

ING5 (16.3) is recommended for detection of ING5 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ING5 siRNA (h): sc-105577, ING5 shRNA Plasmid (h): sc-105577-SH and ING5 shRNA (h) Lentiviral Particles: sc-105577-V.

Molecular Weight of ING5: 27 kDa.

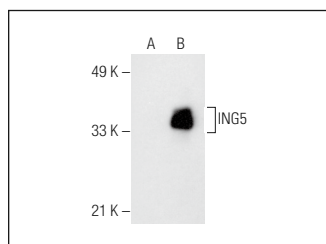
Positive Controls: ING5 (h): 293T Lysate: sc-369480.

## 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).

## DATA



ING5 (16.3): sc-135744. Western blot analysis of ING5 expression in non-transfected: sc-117752 (A) and human ING5 transfected: sc-369480 (B) 293T whole cell lysates.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.