SANTA CRUZ BIOTECHNOLOGY, INC.

ING4 (87.72): sc-135743



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 INGX. 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

- 1. Shiseki, M., et al. 2003. p29^{ING4} and p28^{ING5} bind to p53 and p300 and enhance p53 activity. Cancer Res. 63: 2373-2378.
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- Garkavtsev, I., et al. 2004. The candidate tumour suppressor protein ING4 regulates brain tumour growth and angiogenesis. Nature 428: 328-332.
- Zhang, X., et al. 2004. ING4 induces G₂/M cell cycle arrest and enhances the chemosensitivity to DNA-damage agents in HepG2 cells. FEBS Lett. 570: 7-12.
- Ozer, A., et al. 2005. Regulation of HIF by prolyl hydroxylases: recruitment of the candidate tumor suppressor protein ING4. Cell Cycle 4: 1153-1156.
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- Zhang, X., et al. 2005. Nuclear localization signal of ING4 plays a key role in its binding to p53. Biochem. Biophys. Res. Commun. 331: 1032-1038.
- Gunduz, M., et al. 2005. Frequent deletion and downregulation of ING4, a candidate tumor suppressor gene at 12p13, in head and neck squamous cell carcinomas. Gene 356: 109-117.

CHROMOSOMAL LOCATION

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

SOURCE

ING4 (87.72) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 144-154 of ING4 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.

RESEARCH USE

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

APPLICATIONS

ING4 (87.72) is recommended for detection of ING4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgGκ BP-HRP: sc-516102 or m-lgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

STORAGE

Store at 4° C, **D0 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 for detailed protocols and support products.