

# INO80B (Y-20): sc-243087

## BACKGROUND

The zinc finger HIT domain-containing family of proteins (ZNHIT1-4) contain one HIT-type zinc finger domain and have a variety of functions throughout the cell. INO80B (INO80 complex subunit B), also known as ZNHIT4 (zinc finger HIT domain-containing protein 4), PAPA1 (PAP-1-associated protein 1), PAPA-1 or HMGA1L4, is a 343 amino acid member of the zinc finger HIT family that acts as a PAP-1 (Pim-1-associated protein, also known as RP9) binding protein. Localized to the nucleolus and highly expressed in the testis, INO80B functions to induce growth arrest by hauling the cell cycle at the G<sub>1</sub> phase. INO80B expression is controlled at the transcriptional level and is highest at the G<sub>0</sub> and G<sub>1</sub> phases of the cell cycle. *In vitro*, INO80B binds PAP-1, a splicing factor, and may play a role in nucleolar complexes that regulate ribosome biogenesis and cell cycle events.

## REFERENCES

1. Keen, T.J., Hims, M.M., McKie, A.B., Moore, A.T., Doran, R.M., Mackey, D.A., Mansfield, D.C., Mueller, R.F., Bhattacharya, S.S., Bird, A.C., Markham, A.F. and Inglehearn, C.F. 2002. Mutations in a protein target of the Pim-1 kinase associated with the RP9 form of autosomal dominant retinitis pigmentosa. *Eur. J. Hum. Genet.* 10: 245-249.
2. Maita, H., Kitaura, H., Keen, T.J., Inglehearn, C.F., Ariga, H. and Iguchi-Arigo, S.M. 2004. PAP-1, the mutated gene underlying the RP9 form of dominant retinitis pigmentosa, is a splicing factor. *Exp. Cell Res.* 300: 283-296.
3. Kuroda, T.S., Maita, H., Tabata, T., Taira, T., Kitaura, H., Ariga, H. and Iguchi-Arigo, S.M. 2004. A novel nucleolar protein, PAPA-1, induces growth arrest as a result of cell cycle arrest at the G<sub>1</sub> phase. *Gene.* 340: 83-98.
4. Maita, H., Kitaura, H., Ariga, H. and Iguchi-Arigo, S.M. 2005. Association of PAP-1 and Prp3p, the products of causative genes of dominant retinitis pigmentosa, in the tri-snRNP complex. *Exp. Cell Res.* 302: 61-68.
5. Maita, H., Kitaura, H., Ariga, H. and Iguchi-Arigo, S.M. 2005. CIR, a corepressor of CBF1, binds to PAP-1 and effects alternative splicing. *Exp. Cell Res.* 303: 375-387.

## CHROMOSOMAL LOCATION

Genetic locus: INO80B (human) mapping to 2p13.1; Ino80b (mouse) mapping to 6 C3.

## SOURCE

INO80B (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of INO80B 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-243087 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

INO80B (Y-20) is recommended for detection of INO80B 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); non cross-reactive with INO80C, INO80D or INO80E.

INO80B (Y-20) is also recommended for detection of INO80B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for INO80B siRNA (h): sc-94944, INO80B siRNA (m): sc-155812, INO80B shRNA Plasmid (h): sc-94944-SH, INO80B shRNA Plasmid (m): sc-155812-SH, INO80B shRNA (h) Lentiviral Particles: sc-94944-V and INO80B shRNA (m) Lentiviral Particles: sc-155812-V.

Molecular Weight of INO80B: 50 kDa.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.