

INO80B (E-3): sc-390009

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 halting the cell cycle at the G₁ phase. INO80B expression is controlled at the transcriptional level and is highest at the G₀ and G₁ 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

- Keen, T.J., et al. 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.
- Maita, H., et al. 2004. PAP-1, the mutated gene underlying the RP9 form of dominant retinitis pigmentosa, is a splicing factor. *Exp. Cell Res.* 300: 283-296.
- Kuroda, T.S., et al. 2004. A novel nucleolar protein, PAPA-1, induces growth arrest as a result of cell cycle arrest at the G₁ phase. *Gene* 340: 83-98.

CHROMOSOMAL LOCATION

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

SOURCE

INO80B (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 109-147 within an internal region of INO80B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

INO80B (E-3) is available conjugated to agarose (sc-390009 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390009 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390009 PE), fluorescein (sc-390009 FITC), Alexa Fluor® 488 (sc-390009 AF488), Alexa Fluor® 546 (sc-390009 AF546), Alexa Fluor® 594 (sc-390009 AF594) or Alexa Fluor® 647 (sc-390009 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390009 AF680) or Alexa Fluor® 790 (sc-390009 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390009 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

INO80B (E-3) is recommended for detection of INO80B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

INO80B (E-3) 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.

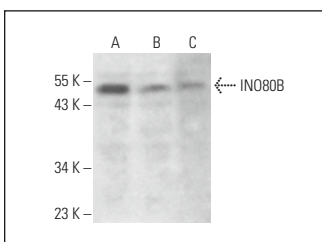
Molecular Weight of INO80B: 50 kDa.

Positive Controls: INO80B (m2): 293T Lysate: sc-124817, MCF7 whole cell lysate: sc-2206 or PC-3 cell lysate: sc-2220.

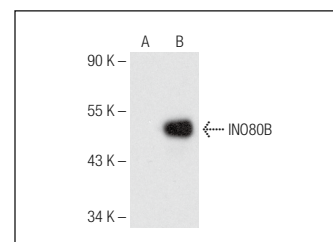
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



INO80B (E-3): sc-390009. Western blot analysis of INO80B expression in PC-3 (A), MCF7 (B) and EOC 20 (C) whole cell lysates.



INO80B (E-3): sc-390009. Western blot analysis of INO80B expression in non-transfected: sc-117752 (A) and mouse INO80B transfected: sc-124817 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Lukauskas, S., et al. 2024. Decoding chromatin states by proteomic profiling of nucleosome readers. *Nature* 627: 671-679.

STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA