

CIP2A (HL1916): sc-80661

BACKGROUND

Cancerous inhibitor of protein phosphatase 2A (CIP2A), also designated p90 autoantigen or KIAA1524, is a single-pass membrane protein that exhibits oncogenic activity. CIP2A is known to inhibit PP2A (protein phosphatase 2A) dephosphorylation of c-Myc, thereby stabilizing c-Myc (an oncogenic transcription factor) and promoting tumor formation and malignant cell growth. PP2A is a trimeric protein complex consisting of three subunits: a scaffold subunit, a catalytic subunit and a regulatory subunit. CIP2A specifically interacts with the catalytic subunit of PP2A to inhibit its activity. Inhibition of PP2A activity is a crucial step allowing for the progression of human cell transformation. Further supporting its role as an oncoprotein, CIP2A is known to be overexpressed in colon, gastric and head and neck squamous cell carcinomas.

REFERENCES

- Janssens, V. and Goris, J. 2001. Protein phosphatase 2A: a highly regulated family of serine/threonine phosphatases implicated in cell growth and signalling. *Biochem. J.* 353: 417-439.
- Soo Hoo, L., et al. 2002. Cloning and characterization of a novel 90 kDa "companion" auto-antigen of p62 overexpressed in cancer. *Oncogene* 21: 5006-5015.
- Shi, F.D., et al. 2005. Preferential humoral immune response in prostate cancer to cellular proteins p90 and p62 in a panel of tumor-associated antigens. *Prostate* 63: 252-258.
- Arnold, H.K. and Sears, R.C. 2006. Protein phosphatase 2A regulatory subunit B56 α associates with c-Myc and negatively regulates c-Myc accumulation. *Mol. Cell. Biol.* 26: 2832-2844.
- Junttila, M.R., et al. 2007. CIP2A inhibits PP2A in human malignancies. *Cell* 130: 51-62.

CHROMOSOMAL LOCATION

Genetic locus: KIAA1524 (human) mapping to 3q13.13.

SOURCE

CIP2A (HL1916) is a mouse monoclonal antibody raised against C-terminal CIP2A of human origin.

PRODUCT

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

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 for detailed protocols and support products.

APPLICATIONS

CIP2A (HL1916) is recommended for detection of CIP2A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CIP2A siRNA (h): sc-77964, CIP2A shRNA Plasmid (h): sc-77964-SH and CIP2A shRNA (h) Lentiviral Particles: sc-77964-V.

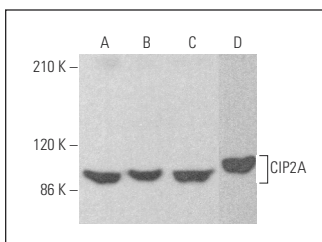
Molecular Weight of CIP2A: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, COLO 320DM cell lysate: sc-2226 or SW480 cell lysate: sc-2219.

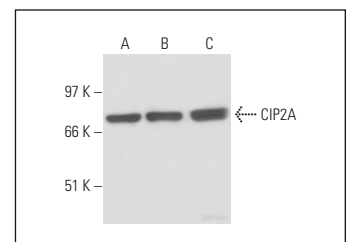
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



CIP2A (HL1916): sc-80661. Western blot analysis of CIP2A expression in MDA-MB-231 (A), Jurkat (B), K-562 (C) and HeLa (D) whole cell lysates.



CIP2A (HL1916): sc-80661. Western blot analysis of CIP2A expression in HeLa (A), SW480 (B) and COLO 320DM (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Sung, W.W., et al. 2013. IL-10 promotes tumor aggressiveness via upregulation of CIP2A transcription in lung adenocarcinoma. *Clin. Cancer Res.* 19: 4092-4103.

RESEARCH USE

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



See **CIP2A (HL1925): sc-80662** for CIP2A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.