

pICln (G-1): sc-271327

BACKGROUND

The formation of the spliceosome includes the assembly of Sm proteins in an ordered manner onto snRNAs. This process is mediated by the survival of motor neuron (SMN) protein, and is enhanced by modification of specific arginine residues in the Sm proteins to symmetrical dimethylarginines (sDMAs). sDMA modification of Sm proteins is catalyzed by the methyltransferase, a complex comprised of the type II methyltransferase PRMT5 (also designated JAK-binding protein 1, JBP1), pICln, and two novel factors. PRMT5 binds the Sm proteins via their arginine- and glycine-rich (RG) domains, while pICln binds the Sm domains. pICln also acts as an inhibitor of SnRNP assembly by preventing specific interactions between Sm proteins required for the formation of the Sm core. pICln is a highly conserved, ubiquitously expressed protein that localizes primarily to the cytoplasm, and may play a role as a swelling-activated anion channel or a channel regulator in addition to its function in the methyltransferase. The gene encoding human pICln maps to chromosome 11q14.1.

REFERENCES

- Schwartz, R.S., et al. 1997. Molecular cloning and expression of a chloride channel-associated protein pICln in human young red blood cells: association with actin. *Biochem. J.* 327: 609-616.
- Emma, F., et al. 1998. Characterization of pICln binding proteins: identification of p17 and assessment of the role of acidic domains in mediating protein-protein interactions. *Biochim. Biophys. Acta* 1404: 321-328.
- Li, C., et al. 1998. Recombinant pICln forms highly cation-selective channels when reconstituted into artificial and biological membranes. *J. Gen. Physiol.* 112: 727-736.
- Pu, W.T., et al. 2000. ICln is essential for cellular and early embryonic viability. *J. Biol. Chem.* 275: 12363-12366.

CHROMOSOMAL LOCATION

Genetic locus: CLNS1A (human) mapping to 11q14.1; Clns1a (mouse) mapping to 7 E2.

SOURCE

pICln (G-1) is a mouse monoclonal antibody raised against amino acids 1-237 representing full length pICln 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.

pICln (G-1) is available conjugated to agarose (sc-271327 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271327 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271327 PE), fluorescein (sc-271327 FITC), Alexa Fluor® 488 (sc-271327 AF488), Alexa Fluor® 546 (sc-271327 AF546), Alexa Fluor® 594 (sc-271327 AF594) or Alexa Fluor® 647 (sc-271327 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271327 AF680) or Alexa Fluor® 790 (sc-271327 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

pICln (G-1) is recommended for detection of pICln 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).

Suitable for use as control antibody for pICln siRNA (h): sc-42594, pICln siRNA (m): sc-42595, pICln shRNA Plasmid (h): sc-42594-SH, pICln shRNA Plasmid (m): sc-42595-SH, pICln shRNA (h) Lentiviral Particles: sc-42594-V and pICln shRNA (m) Lentiviral Particles: sc-42595-V.

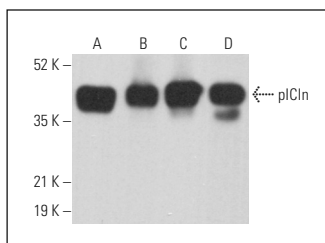
Molecular Weight of pICln: 39 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

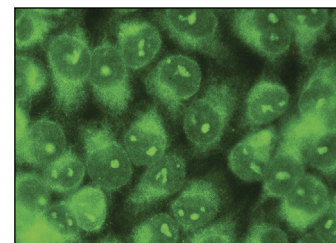
RECOMMENDED SUPPORT REAGENTS

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



pICln (G-1): sc-271327. Western blot analysis of pICln expression in HL-60 (A), HeLa (B), K-562 (C) and Jurkat (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



pICln (G-1): sc-271327. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

- Krapivinsky, G., et al 2017. Histone phosphorylation by TRPM6's cleaved kinase attenuates adjacent arginine methylation to regulate gene expression. *Proc. Natl. Acad. Sci. USA* 114: E7092-E7100.

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.