

pICln (m): 293T Lysate: sc-127333

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 methylosome, 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 methylosome. The gene encoding human pICln maps to chromosome 11q14.1.

REFERENCES

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2. 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.
3. 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.
4. Pu, W.T., et al. 2000. ICln is essential for cellular and early embryonic viability. *J. Biol. Chem.* 275: 12363-12366.
5. Meister, G., et al. 2001. Methylation of Sm proteins by a complex containing PRMT5 and the putative U snRNP assembly factor pICln. *Curr. Biol.* 11: 1990-1994.
6. Friesen, W.J., et al. 2001. The methylosome, a 20S complex containing JBP1 and pICln, produces dimethylarginine-modified Sm proteins. *Mol. Cell. Biol.* 21: 8289-8300.

CHROMOSOMAL LOCATION

Genetic locus: Clns1a (mouse) mapping to 7 E2.

PRODUCT

pICln (m): 293T Lysate represents a lysate of mouse pICln transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

pICln (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive pICln antibodies. Recommended use: 10-20 µl per lane.

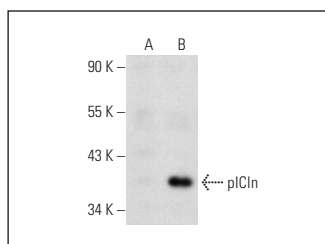
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

pICln (G-1): sc-271327 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse pICln expression in pICln transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



pICln (G-1): sc-271327. Western blot analysis of pICln expression in non-transfected: sc-117752 (A) and mouse pICln transfected: sc-127333 (B) 293T whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.