SANTA CRUZ BIOTECHNOLOGY, INC.

pICln (C-5): sc-393525

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

pICln (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 159-186 within an internal region of pICln of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

pICln (C-5) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

pICln (C-5) is also recommended for detection of pICln in additional species, including equine, canine, bovine, porcine and avian.

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.

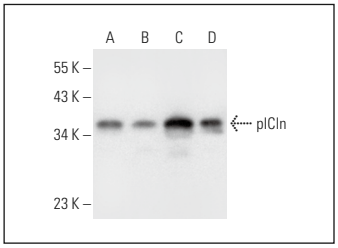
Molecular Weight of pICln: 39 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

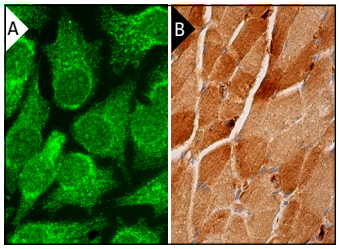
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



pICln (C-5): sc-393525. Western blot analysis of pICln expression in Hep G2 (**A**), ECV304 (**B**), HL-60 (**C**) and HeLa (**D**) whole cell lysates.



pICln (C-5): sc-393525. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing nuclear and cytoplasmic staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Costa, R., et al. 2020. O-GlcNAcylation suppresses the Ion current IClswell by preventing the binding of the protein ICln to α-Integrin. Front. Cell Dev. Biol. 8: 607080.
2. Schmitz, K., et al. 2021. An essential role of the autophagy activating kinase ULK1 in snRNP biogenesis. Nucleic Acids Res. 49: 6437-6455.
3. Krzyzanowski, A., et al. 2022. Development of macrocyclic PRMT5-adaptor protein interaction inhibitors. J. Med. Chem. 65: 15300-15311.
4. Shen, Z., et al. 2025. Discovery of PRMT5 N-terminal TIM barrel ligands from machine-learning-based virtual screening. ACS Omega 10: 1156-1163.

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.