

PML (H-238): sc-5621

BACKGROUND

The PML protein is a zinc finger transcription factor expressed as three major transcription products due to alternative splicing. The gene encoding human PML maps to chromosome 15q24.1. The t(15;17) (q22;q11.2-q12) chromosomal *trans*-location of the retinoic acid receptor α (RAR α) gene occurs in virtually all cases of acute promyelocytic leukemia and results in the expression of a PML/RAR α chimeric protein. Myeloid precursor cells expressing the PML/RAR α chimera fail to differentiate and exhibit an increased growth rate consequent to diminished apoptosis. PML/RAR α transforms myeloid precursors by recruiting the nuclear co-repressor (N-CoR)-histone deacetylase complex that is essential to retinoic acid-dependent myeloid differentiation. PML/RAR α also recruits DNA methyltransferases in order to induce gene hypermethylation and silencing, which ultimately facilitates leukemogenesis.

CHROMOSOMAL LOCATION

Genetic locus: PML (human) mapping to 15q24.1; Pml (mouse) mapping to 9 B.

SOURCE

PML (H-238) is a rabbit polyclonal antibody raised against amino acids 157-394 of PML of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-5621 X, 200 μ g/0.1 ml.

APPLICATIONS

PML (H-238) is recommended for detection of all isoforms of PML of mouse, rat and 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)], 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).

PML (H-238) is also recommended for detection of all isoforms of PML in additional species, including equine.

Suitable for use as control antibody for PML siRNA (h): sc-36284, PML siRNA (m): sc-36283, PML shRNA Plasmid (h): sc-36284-SH, PML shRNA Plasmid (m): sc-36283-SH, PML shRNA (h) Lentiviral Particles: sc-36284-V and PML shRNA (m) Lentiviral Particles: sc-36283-V.

PML (H-238) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

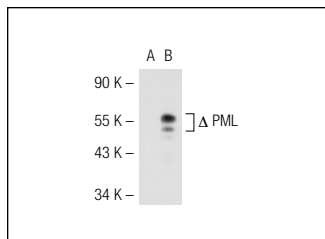
Molecular Weight of PML isoforms: 78/97 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, COLO 320DM cell lysate: sc-2226 or PML (m): 293T Lysate: sc-122659.

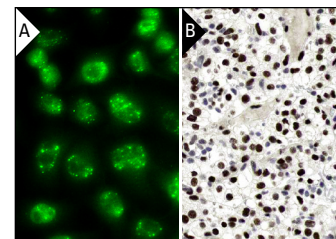
STORAGE

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

DATA



PML (H-238): sc-5621. Western blot analysis of PML expression in non-transfected: sc-117752 (A) and truncated mouse PML transfected: sc-122659 (B) 293T whole cell lysates.



PML (H-238): sc-5621. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human renal cancer tissue showing nuclear staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Fang, W., et al. 2002. Regulation of PML-dependent transcriptional repression by pRB and low penetrance pRB mutants. *Oncogene* 21: 5557-5565.
- Sundvall, M., et al. 2012. Protein inhibitor of activated STAT3 (PIAS3) protein promotes SUMOylation and nuclear sequestration of the intracellular domain of ErbB4 protein. *J. Biol. Chem.* 287: 23216-23226.
- Godin, F., et al. 2012. A fraction of neurofibromin interacts with PML bodies in the nucleus of the CCF astrocytoma cell line. *Biochem. Biophys. Res. Commun.* 418: 689-694.
- Willmes, C., et al. 2012. Type I and II IFNs inhibit Merkel cell carcinoma via modulation of the Merkel cell polyomavirus T antigens. *Cancer Res.* 72: 2120-2128.
- Osterwald, S., et al. 2012. A three-dimensional colocalization RNA interference screening platform to elucidate the alternative lengthening of telomeres pathway. *Biotechnol. J.* 7: 103-116.
- Maroui, M.A., et al. 2012. Requirement of PML SUMO interacting motif for RN4- or arsenic trioxide-induced degradation of nuclear PML isoforms. *PLoS ONE* 7: e44949.

RESEARCH USE

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



Try **PML (PG-M3): sc-966** or **PML (G-8): sc-377340**, our highly recommended monoclonal alternatives to PML (H-238). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PML (PG-M3): sc-966**.