

PML (A-20): sc-9863

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 translocation 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 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-9863 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9863 X, 200 μ g/0.1 ml.

APPLICATIONS

PML (A-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PML (A-20) is also recommended for detection of all isoforms of PML in additional species, including equine, canine, bovine and porcine.

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 (A-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

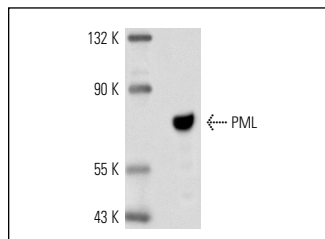
Molecular Weight of PML isoforms: 78/97 kDa.

Positive Controls: mouse lymph node extract: sc-364243, mouse cerebellum extract: sc-2403 or COLO 320DM cell lysate: sc-2226.

STORAGE

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

DATA



PML (A-20): sc-9863. Western blot analysis of PML expression in mouse lymph node tissue extract.

SELECT PRODUCT CITATIONS

- Wang, I.F., et al. 2002. Higher order arrangement of the eukaryotic nuclear bodies. *Proc. Natl. Acad. Sci. USA* 99: 13583-13588.
- Lopez, P., et al. 2002. Gene control in germinal differentiation: RNF6, a transcription regulatory protein in the mouse sertoli cell. *Mol. Cell. Biol.* 22: 3488-3496.
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- Shyu, Y.C., et al. 2005. Sumoylation of p45/NF-E2: nuclear positioning and transcriptional activation of the mammalian β -like globin gene locus. *Mol. Cell. Biol.* 25: 10365-10378.
- Hakli, M., et al. 2005. SUMO-1 promotes association of SNURF (RNF4) with PML nuclear bodies. *Exp. Cell Res.* 304: 224-233.
- Goodier, J.L., et al. 2010. Discrete subcellular partitioning of human retrotransposon RNAs despite a common mechanism of genome insertion. *Hum. Mol. Genet.* 19: 1712-1725.
- Diaz-Griffero, F., et al. 2011. Trafficking of some old world primate TRIM5 α proteins through the nucleus. *Retrovirology* 8: 38.

RESEARCH USE

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



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