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 (RARα) gene occurs in virtually all cases of acute promyelocytic leukemia and results in the expression of a PML/RARα chimeric protein. Myeloid precursor cells expressing the PML/RARα chimeric protein fail to differentiate and exhibit an increased growth rate consequent to diminished apoptosis. PML/RARα transforms myeloid precursors by recruiting the nuclear co-repressor (N-CoR)-histone deacetylase complex that is essential to retinoic acid-dependent myeloid differentiation. PML/RARα 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.

SOURCE
PML (G-8) is a mouse monoclonal antibody raised against amino acids 157-394 of PML of human origin.

PRODUCT
Each vial contains 200 µg IgG2b, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377340 X, 200 µg/0.1 ml.

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

APPLICATIONS
PML (G-8) is recommended for detection of all isoforms of PML of 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 1:50-1:150) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

PML (G-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PML isoforms: 78/97 kDa.
Positive Controls: K-562 nuclear extract: sc-2130, COLO 320DM cell lysate: sc-2226 or human lymph node extract: sc-363768.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:

DATA

SELECT PRODUCT CITATIONS

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

See PML (E-11): sc-377390 for PML antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.