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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PML (m): 293T Lysate: sc-122659

## 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 15q22. The t(15;17) (q22;q11.2-q12) chromosomal translocation of the retinoic acid receptor  $\alpha$  (RAR $\alpha$ ) gene occurs in virtually all cases of acute promyelocytic leukemia and results in the expression of a PML/RAR $\alpha$  chimeric protein of 106 kDa. Myeloid precursor cells expressing the PML/RAR $\alpha$  chimera fail to differentiate and exhibit an increased growth rate consequent to diminished apoptosis. PML/RAR $\alpha$  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 $\alpha$  also recruits DNA methyltransferases in order to induce gene hypermethylation and silencing, which ultimately facilitates leukemogenesis.

## REFERENCES

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2. Borrow, J., et al. 1990. Molecular analysis of acute promyelocytic leukemia breakpoint cluster region on chromosome 17. *Science* 249: 1577-1580.
3. Goddard, A.D., et al. 1991. Characterization of a zinc finger gene disrupted by the t(15;17) in acute promyelocytic leukemia. *Science* 254: 1371-1374.
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6. Diverio, D., et al. 1992. Identification of DNA rearrangements at the retinoic acid receptor  $\alpha$  (RAR $\alpha$ ) locus in all patients with acute promyelocytic leukemia and mapping of APL breakpoints within the RAR  $\alpha$  second intron. *Blood* 79: 3331-3336.
7. Grignani, F., et al. 1993. The acute promyelocytic leukemia-specific PML-RAR fusion protein inhibits differentiation and promotes survival of myeloid precursor cells. *Cell* 74: 423-431.
8. Grignani, F., et al. 1998. Fusion proteins of the retinoic acid receptor- $\alpha$  recruit histone deacetylase in promyelocytic leukaemia. *Nature* 391: 815-818.
9. Di Croce, L., et al. 2002. Methyltransferase recruitment and DNA hypermethylation of target promoters by an oncogenic transcription factor. *Science* 295: 1079-1082.

## CHROMOSOMAL LOCATION

Genetic locus: Pml (mouse) mapping to 9 B.

## PRODUCT

PML (m): 293T Lysate represents a lysate of mouse PML transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

PML (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PML antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.