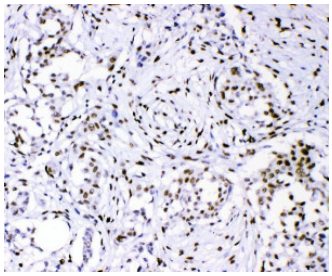
PML Antibody / Promyelocytic Leukemia Protein Polyclonal Antibody (R32552)

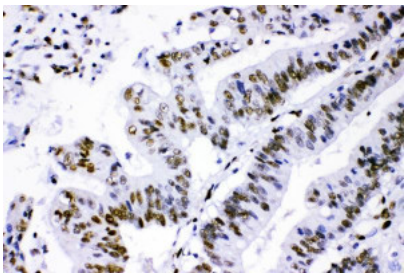
Catalog No.	Formulation	Size
R32552	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

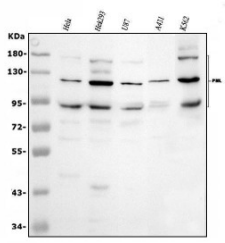
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P29590
Localization	Nuclear, cytoplasmic (isoform dependent)
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This PML Antibody / Promyelocytic Leukemia Protein Polyclonal Antibody is available for research use only.



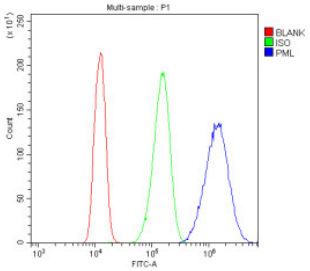
PML Antibody IHC Staining of Human Mammary Carcinoma. Immunohistochemical analysis of FFPE human mammary carcinoma tissue using Promyelocytic Leukemia Protein Polyclonal Antibody at 1 ug/ml. Brown DAB staining is detected in the nuclei of carcinoma cells, with variable staining across the tissue section. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.



PML Antibody IHC Staining of Human Intestinal Carcinoma. Immunohistochemical analysis of FFPE human intestinal carcinoma tissue using Promyelocytic Leukemia Protein Polyclonal Antibody at 1 ug/ml. Brown DAB immunoreactivity is observed predominantly in the nuclei of malignant epithelial cells, consistent with the established nuclear localization of PML. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.



PML Antibody WB Analysis of HeLa, HEK293, U87, A431 and K562 Cell Lysates. Western blot analysis of human HeLa (lane 1), HEK293 (lane 2), U87 (lane 3), A431 (lane 4), and K562 (lane 5) whole-cell lysates using Promyelocytic Leukemia Protein Polyclonal Antibody at 0.5 ug/ml. Immunoreactive bands are detected between approximately 90 and 160 kDa, with a prominent band near 115-120 kDa in all five samples. PML has multiple alternatively spliced isoforms and undergoes post-translational modifications, including SUMOylation, although the individual detected bands have not been assigned to specific molecular forms. Each lane contains 30 ug of protein.



PML Antibody FACS Staining of Human A431 Cells. Flow cytometry analysis of fixed and permeabilized human A431 cells using Promyelocytic Leukemia Protein Polyclonal Antibody at 1 ug per 1 x 10^6 cells. The antibody-stained population is represented by the blue histogram, with the rabbit IgG isotype control shown in green and the unstained control in red. Cells were fixed with 4% paraformaldehyde before permeabilization and intracellular staining.

Description

PML Antibody / Promyelocytic Leukemia Protein Polyclonal Antibody targets promyelocytic leukemia protein (PML), also known as TRIM19, a member of the tripartite motif family involved in nuclear organization, transcriptional regulation, and cellular stress responses. PML functions as a tumor suppressor and is best known for its role in organizing PML nuclear bodies, dynamic nuclear structures that recruit numerous regulatory proteins. These structures participate in processes including apoptosis, senescence, DNA damage responses, and antiviral defense. PML contains a conserved RBCC motif comprising a RING finger domain, two B-box domains, and a coiled-coil region that contributes to protein interactions and nuclear body assembly.

PML nuclear bodies serve as organizational platforms for proteins involved in transcriptional control, genome maintenance, and cellular stress signaling. Their formation depends on PML oligomerization and post-translational modifications, particularly SUMOylation. SUMO modification promotes interactions with proteins containing SUMO-interacting motifs and contributes to the recruitment and retention of nuclear body components. PML also undergoes phosphorylation, ubiquitination, and other regulatory modifications that influence its stability, localization, and interactions. Alternative splicing generates multiple PML isoforms with distinct C-terminal sequences, contributing to differences in subcellular distribution and biological function.

PML has an important role in regulating the p53 tumor suppressor pathway and cellular responses to oncogenic stress. Through interactions with transcriptional regulators and signaling proteins, PML contributes to cell cycle control, apoptosis, and senescence. Its nuclear bodies also participate in DNA damage signaling and the regulation of chromatin-associated processes. PML expression and nuclear body organization can change in response to interferon signaling, viral infection, oxidative stress, and other cellular challenges. These properties connect PML to both intrinsic tumor suppression and broader mechanisms of cellular defense.

The PML gene is prominently associated with acute promyelocytic leukemia, in which a chromosomal translocation produces the PML-RARA fusion protein. This oncogenic fusion disrupts normal PML nuclear body organization and alters retinoic acid-dependent transcriptional regulation. Therapeutic degradation of PML-RARA allows restoration of normal nuclear structures and contributes to leukemia cell differentiation. Beyond leukemia, altered PML expression and function have been investigated in solid tumors, metabolic regulation, and cellular aging. PML Antibody supports research into nuclear body organization, tumor suppressor signaling, and the molecular mechanisms linking PML dysfunction to cancer and other diseases.

PML is an important tumor suppressor associated with nuclear body organization, cellular stress responses, and acute promyelocytic leukemia, making it a significant target in cancer research.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the PML Antibody / Promyelocytic Leukemia Protein Polyclonal Antibody to be titrated for optimal performance.

Immunogen

Amino acids 141-179 (FECEQLLCAKCFEAHQWFLKHEARPLAELRNQSVREFLD) from the human protein were used as the immunogen for the PML antibody.

Storage

After reconstitution, the PML antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

TRIM19 antibody, Promyelocytic leukemia protein antibody, Protein PML antibody, Tripartite motif-containing protein 19 antibody, Promyelocytic leukemia nuclear body protein antibody, PML nuclear body protein antibody, PML tumor suppressor antibody, RING finger protein PML antibody, Promyelocytic leukemia zinc finger protein antibody, PML protein antibody

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