

PRDM14 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP1214a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q9GZV8
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	64062
Antigen Region	1-30

Additional Information

Gene ID	63978
Other Names	PR domain zinc finger protein 14, 211-, PR domain-containing protein 14, PRDM14
Target/Specificity	This PRDM14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PRDM14.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PRDM14 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRDM14
Function	Transcription factor that has both positive and negative roles on transcription. Required for the maintenance of embryonic stem cell identity and the reacquisition of pluripotency in somatic cells. May play an essential role in germ cell development at 2 levels: the reacquisition of potential

pluripotency, including SOX2 up-regulation, and successful epigenetic reprogramming, characterized by EHMT1 repression. Its association with CBFA2T2 is required for the functions in pluripotency and germ cell formation (By similarity). Directly up-regulates the expression of pluripotency gene POU5F1 through its proximal enhancer. Binds to the DNA consensus sequence 5'-GGTC[TC]CTAA-3'.

Cellular Location

Nucleus.

Tissue Location

Expressed in embryonic stem cells. Tends to be overexpressed in breast cancer (at protein level)

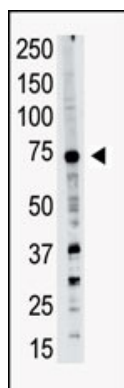
Background

Similar to acetylation and phosphorylation, histone methylation at the N terminal tail has emerged as an important role in regulating chromatin dynamics and gene activity. Histone methylation occurs on arginine and lysine residues and is catalyzed by two families of proteins, the protein arginine methyltransferase family and the SET domain containing methyltransferase family. Five members have been identified in the arginine methyltransferase family. About 27 are grouped into the SET domain family, and another 17 make up the PR domain family that is related to the SET domain family. PRDM14 is part of a family of PR domain genes that are involved in tumorigenesis. It may function as a transcription factor.

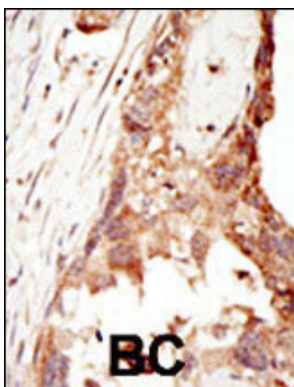
References

- Xiao, B., et al., Curr. Opin. Struct. Biol. 13(6):699-705 (2003).
 Dias Neto, E., et al., Proc. Natl. Acad. Sci. U.S.A. 97(7):3491-3496 (2000).
 Jiang, G.L., et al., Histol. Histopathol. 15(1):109-117 (2000).

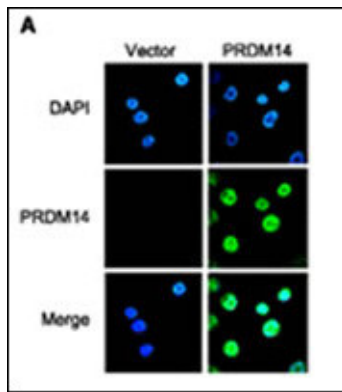
Images



Western blot analysis of PRDM14 polyclonal antibody (Cat. #AP1214a) in A549 cell lysate. PRDM14 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



IF analysis of PRDM14 in breast cancer cells. SKBr-3 cells were transfected with pCMV-Tag2A or pCMV-PRDM14 and then labeled with anti-PRDM14 antibody. The nucleus was stained with DAPI.

Citations

- [Gene amplification and overexpression of PRDM14 in breast cancers.](#)
- [Human primordial germ cell commitment in vitro associates with a unique PRDM14 expression profile.](#)
- [PRDM14 suppresses expression of differentiation marker genes in human embryonic stem cells.](#)
- [PRDM5 identified as a target of epigenetic silencing in colorectal and gastric cancer.](#)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.