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PRDM16 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1216a

Specification

PRDM16 Antibody (N-term) - Product Information

Application	**IHC-P,E**
Primary Accession	Q9HAZ2
Other Accession	NP_071397
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**1-316**

PRDM16 Antibody (N-term) - Additional Information

Gene ID 63976

Other Names
PR domain zinc finger protein 16, PR domain-containing protein 16, Transcription factor MEL1, MDS1/EVI1-like gene 1, PRDM16, KIAA1675, MEL1, PFM13

Target/Specificity
This PRDM16 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1~316 amino acids from the N-terminal region of human PRDM16.

Dilution
IHC-P~~1:50~100
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
PRDM16 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PRDM16 Antibody (N-term) - Protein Information

Name PRDM16 (HGNC:14000)

Function Binds DNA and functions as a transcriptional regulator (PubMed:12816872). Displays

histone methyltransferase activity and monomethylates 'Lys-9' of histone H3 (H3K9me1) in vitro (By similarity). Probably catalyzes the monomethylation of free histone H3 in the cytoplasm which is then transported to the nucleus and incorporated into nucleosomes where SUV39H methyltransferases use it as a substrate to catalyze histone H3 'Lys-9' trimethylation (By similarity). Likely to be one of the primary histone methyltransferases along with MECOM/PRDM3 that direct cytoplasmic H3K9me1 methylation (By similarity). Functions in the differentiation of brown adipose tissue (BAT) which is specialized in dissipating chemical energy in the form of heat in response to cold or excess feeding while white adipose tissue (WAT) is specialized in the storage of excess energy and the control of systemic metabolism (By similarity). Together with CEBPB, regulates the differentiation of myoblastic precursors into brown adipose cells (By similarity). Functions as a repressor of TGF-beta signaling (PubMed:19049980).

Cellular Location
Nucleus. Cytoplasm

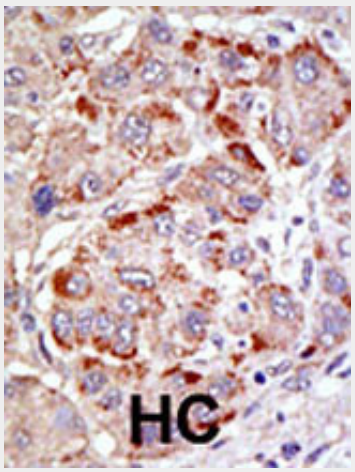
Tissue Location
Expressed in uterus and kidney. Expressed in both cardiomyocytes and interstitial cells.

PRDM16 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PRDM16 Antibody (N-term) - Images



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

PRDM16 Antibody (N-term) - Background

The reciprocal translocation t(1;3)(p36;q21) occurs in a subset of myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML). This gene is located near the 1p36.3 breakpoint and has been shown to be specifically expressed in the t(1:3)(p36,q21)-positive MDS/AML. The protein encoded by this gene is a zinc finger transcription factor and contains an N-terminal PR domain. The translocation results in the overexpression of a truncated version of this protein that lacks the PR domain, which may play an important role in the pathogenesis of MDS and AML. Alternatively spliced transcript variants encoding distinct isoforms have been reported.

PRDM16 Antibody (N-term) - References

Lahortiga, I., et al., Oncogene 23(1):311-316 (2004).
Nishikata, I., et al., Blood 102(9):3323-3332 (2003).
Xinh, P.T., et al., Genes Chromosomes Cancer 36(3):313-316 (2003).
Mochizuki, N., et al., Blood 96(9):3209-3214 (2000).
Secker-Walker, L.M., et al., Br. J. Haematol. 91(2):490-501 (1995).