

**Prdm9 Rabbit mAb[86X2]**

**Cat NO. :A61021**

**Information:**

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB,IHC	H,M,R	Q96EQ9	110KDa	Rabbit	IgG	50ul 100ul,200ul

**Applications detail:**

Application	Dilution
WB	1:1000-2000
IHC	1:100
The optimal dilutions should be determined by the end user	

**Conjugate:**

UnConjugate

**Form:**

Liquid

**sensitivity:**

Endogenous

**Purification:**

Protein A purification

**Specificity:**

Antibody is produced by immunizing animals with a synthetic peptide of human Prdm9.

**Storage buffer and conditions:**

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at-20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

**Tissue specificity:**

Specifically expressed in germ cells entering meiotic prophase in female fetal gonads and in postnatal testis (PubMed:16292313). Expressed in early meiotic prophase (PubMed:27932493)..

**Subcellular location:**

Nucleus. Chromosome.

**Function:**

**Introduction:** **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

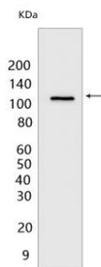
**Cross Reactivity:** **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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Histone methyltransferase that sequentially mono-, di-, and tri-methylates both 'Lys-4' (H3K4) and 'Lys-36' (H3K36) of histone H3 to produce respectively trimethylated 'Lys-4' (H3K4me3) and trimethylated 'Lys-36' (H3K36me3) histone H3 and plays a key role in meiotic prophase by determining hotspot localization thereby promoting meiotic recombination (PubMed:16292313, PubMed:24095733, PubMed:27362481, PubMed:24785241, PubMed:29478809). Also can methylate all four core histones with H3 being the best substrate and the most highly modified (PubMed:24785241, PubMed:27362481). Is also able, on one hand, to mono and di-methylate H4K20 and on other hand to trimethylate H3K9 with the di-methylated H3K9 as the best substrate (PubMed:24785241, PubMed:27362481). During meiotic prophase, binds specific DNA sequences through its zinc finger domains thereby determining hotspot localization where it promotes local H3K4me3 and H3K36me3 enrichment on the same nucleosomes through its histone methyltransferase activity (PubMed:22028627, PubMed:27362481, PubMed:29478809). Thereby promotes double-stranded breaks (DSB) formation, at this subset of PRDM9-binding sites, that initiates meiotic recombination for the proper meiotic progression (PubMed:16292313, PubMed:29478809). During meiotic progression hotspot-bound PRDM9 interacts with several complexes, in early leptotema binds CDYL and EHMT2 followed by EWSR1 and CXXC1 by the end of leptotema (PubMed:27932493). EWSR1 joins PRDM9 with the chromosomal axis through REC8 (PubMed:27932493). In this way, controls the DSB repair pathway, pairing of homologous chromosomes and sex body formation (PubMed:25894966, PubMed:16292313). Moreover plays a central role in the transcriptional activation of genes during early meiotic prophase thanks to H3K4me3 and H3K36me3 enrichment that represents a specific tag for epigenetic transcriptional activation (PubMed:16292313). In addition performs automethylation (PubMed:28126738). Acetylation and phosphorylation of histone H3 attenuate or prevent histone H3 methylation (PubMed:27362481)..

## Validation Data:

### Prdm9 Rabbit mAb[86X2] Images



Western blot (SDS PAGE) analysis of extracts from A-549 cells. Using Prdm9 Rabbit mAb IgG [86X2] at dilution of 1:1000 incubated at 4°C over night.

View more information on <http://naturebios.com>

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.