Revision 4

Store at -20C

#59325

PRDM14 (E2J8Q) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP, ChIP-seq	H	Endogenous	70	Rabbit IgG	#Q9GZV8	63978

Product Usage Information

For optimal ChIP and ChIP-seq results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:100
Chromatin IP-seq	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PRDM14 (E2J8Q) Rabbit mAb recognizes endogenous levels of total PRDM14 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human PRDM14 protein.

Background

PR domain zinc finger protein 14 (PRDM14) is a likely protein lysine methyltransferase that is primarily expressed in primordial germ cells and pluripotent embryonic stem cells. It is essential for the establishment and maintenance of primordial germ cells and critical for the maintenance of pluripotency in embryonic stem cells (1-3). PRDM14 represses genes involved in the differentiation of stem cells into various cell lineages, likely via a combination of interactions with TET proteins, the polycomb repressive complex 2 (PRC2), and CBFA2T2 (3-8). In addition, overexpression of PRDM14 in combination with Jarid2 promotes induced pluripotent stem cell (iPSC) formation (9). PRDM14 protein levels are overexpressed in certain cancers, including breast, leukemia (T-ALL), and non-small cell lung cancer (NSCLC) (10-13), and PRDM14 overexpression may serve as a novel prognostic marker in NSCLC (14). Targeting PRDM14 overexpression with a siRNA-based therapy was shown to decrease liver metastasis in a murine pancreatic cancer model, suggesting potential as a therapeutic option for cancers where this protein is abnormally expressed (15).

Background References

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7. Nady, N. et al. (2015) *Elife* 4, e10150.
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13. Liu, B. et al. (2010) *Zhongguo Fei Ai Za Zhi* 13, 867-72.
14. Zhang, T. et al. (2013) *Med Oncol* 30, 605.
15. Moriya, C. et al. (2017) *Carcinogenesis* 38, 638-648.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

Cross-Reactivity Key

H: Human

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