Revision 4

Store at -20C

#3378

PCAF (C14G9) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:
W, IP, ChIP, ChIP-seq	H M R Mk	Endogenous	93	Rabbit IgG

Product Usage Information

For optimal ChIP and ChIP-seq results, use 20 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	1:25
Chromatin IP-seq	1:25

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

PCAF (C14G9) Rabbit mAb detects endogenous levels of total PCAF protein. The antibody does not cross-react with the related GCN5L2 protein.

Species predicted to react based on 100% sequence homology

Bovine, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the amino terminus of human PCAF protein.

Background

p300/CBP-associated factor (PCAF), also known as lysine acetyl-transferase 2B (KAT2B), is a transcriptional adaptor protein and histone acetyl-transferase (HAT) that functions as the catalytic subunit of the PCAF transcriptional co-activator complex (1). PCAF is 73% homologous to GCN5L2, another HAT protein found in similar complexes (1,2). Like GCN5L2, PCAF acetylates histone H3 on Lys14 and histone H4 on Lys8, both of which contribute to gene activation by modulating chromatin structure and recruiting additional co-activator proteins that contain acetyl-lysine binding bromo-domains (3). PCAF also acetylates non-histone proteins including transcriptional activators (p53, E2F1, MyoD), general transcription factors (TFIIEβ and TFIIF) and architectural DNA binding proteins (HMGA1 and HMG17) (4-10). Acetylation of these proteins regulates their nuclear localization, protein stability, DNA binding, and co-activator association.

Background References

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3. Schiltz, R.L. et al. (1999) *J Biol Chem* 274, 1189-92.
4. Bannister, A.J. and Miska, E.A. (2000) *Cell Mol Life Sci* 57, 1184-92.
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8. Imhof, A. et al. (1997) *Curr Biol* 7, 689-92.
9. Munshi, N. et al. (1998) *Mol Cell* 2, 457-67.
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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 **M:** Mouse **R:** Rat **Mk:** Monkey

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