

#3378 Store at -20°C

PCAF (C14G9) Rabbit mAb



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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, ChIP Endogenous	H, M, R, Mk, (B, Hr)	93 kDa	Rabbit IgG**

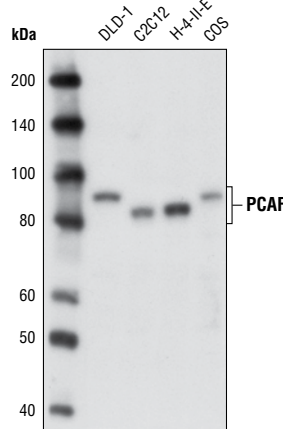
Background: p300/CBP-associated factor (PCAF), also known as lysine acetyl-transferase 2B (KAT2B), is a transcriptional adaptor protein and histone acetyl-transferase (HAT) that functions as the catalytic subunit of the PCAF transcriptional co-activator complex (1). PCAF is 73% homologous to GCN5L2, 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 (TFIIIE β and TFIIIF) 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.

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

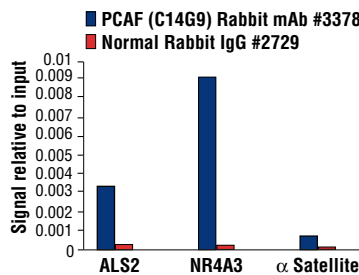
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the amino terminus of human PCAF protein.

Background References:

- (1) Nagy, Z. and Tora, L. (2007) *Oncogene* 26, 5341–57.
- (2) Yang, X.J. et al. (1996) *Nature* 382, 319–24.
- (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.
- (5) Liu, L. et al. (1999) *Mol Cell Biol* 19, 1202–9.
- (6) Martínez-Balbás, M.A. et al. (2000) *EMBO J* 19, 662–71.
- (7) Sartorelli, V. et al. (1999) *Mol Cell* 4, 725–34.
- (8) Imhof, A. et al. (1997) *Curr Biol* 7, 689–92.
- (9) Munshi, N. et al. (1998) *Mol Cell* 2, 457–67.
- (10) Herrera, J.E. et al. (1999) *Mol Cell Biol* 19, 3466–73.



Western blot analysis of extracts from various cell lines using PCAF (C14G9) Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 293 cells treated with Forskolin #3828 (30 μ M) and either PCAF (C14G9) Rabbit mAb or Normal Rabbit IgG #2729 using SimpleChIP[®] Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using human ALS2 exon 1 primers, SimpleChIP[®] Human NR4A3 Promoter Primers #4829, and SimpleChIP[®] Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

Entrez-Gene ID #8850
UniProt ID #Q92831

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:25

Optimal ChIP conditions: 20 μ l of antibody & 10 μ g of chromatin (4 x 10⁶ cells) per IP. Antibody validated using SimpleChIP[®] Enzymatic ChIP Kits.

For application specific protocols please see the web page for this product at www.cellsignal.com.

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U.S. Patent No. 5,675,063

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

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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