



## Product Information

### Anti-PCAF

Developed in Rabbit  
Affinity Isolated Antibody

Product Number **P 7493**

### Product Description

Anti-PCAF is developed in rabbit using a synthetic peptide corresponding to the C-terminal (amino acids 817-832) of human PCAF with N-terminal added cysteine conjugated to KLH as immunogen. The corresponding sequence is identical in mouse and differs by 2 amino acids residues in chicken. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-PCAF recognizes human and dog PCAF. Applications include immunoblotting (~88 kDa) and immunoprecipitation. In some extract preparations, additional band(s) may appear. Staining of PCAF band(s) by immunoblotting is inhibited by the PCAF immunizing peptide.

The basic repeating unit of eukaryotic chromatin is the nucleosome, which consists of 147 bp of DNA wrapped around an octameric protein core consisting of two molecules each of histones H2A, H2B, H3, and H4. These core histones are important for nuclear packaging and DNA organization as well as for regulating various cell processes.

Among the various post-translational histone modifications, acetylation is the most extensively studied.<sup>1-4</sup> Histone acetyltransferases (HATs) are members of a superfamily of enzymes that transfer the acetyl moiety from acetyl-coenzyme A cofactor onto one or more epsilon-amino groups of lysines contained in the extended N-terminal tail domains of core histone proteins. Type A HATs are located in the nucleus, and many of them play a role as transcriptional coactivators. Type B HATs, traditionally thought to locate to the cytoplasm, acetylate nascent cytoplasmic histones prior to chromatin assembly.

PCAF (p300/CBP associated factor, P/CAF), a type A HAT, has been identified in several species.<sup>1,2</sup> Human PCAF is a ubiquitous protein member of the GCN5-related N-acetyltransferase (GNAT) superfamily. It interacts with the p300 and CBP (CREB-binding protein) transcriptional coactivators and may be found in multi-subunit protein complexes formed from more

than 20 polypeptides ranging from 10 to 400 kDa.<sup>5,6</sup> PCAF shows extensive sequence similarity to human and mouse GCN5 HAT. Human PCAF acetylates all four core-histones.<sup>7</sup> It also acetylates nonhistone proteins such as p53, MyoD, TFII $\beta$ , TFII $\epsilon$ , GATA-1, EKLF, HMGI (Y), and several other cellular and viral proteins.<sup>3</sup> PCAF contributes to transcriptional activation by modifying chromatin and transcriptional factors. It is required in many cell growth and development processes such as myogenesis, and in nuclear receptor mediated or growth factor-signaled cell activation.

### Reagent

Anti-PCAF is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.

Antibody concentration: 1.0-1.5 mg/ml

### Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

A minimum working dilution of 1:500 is determined by immunoblotting using whole extracts of human epidermoid carcinoma A431, dog MDCK kidney cells, or recombinant active human PCAF and a chemiluminescent detection reagent.

5-10 µg of antibody immunoprecipitates PCAF from RIPA lysate with  $\sim 4 \times 10^7$  human acute T cell leukemia Jurkat cells.

Note: In order to obtain the best results using different techniques and preparations, we recommend determining the optimal working dilutions by titration.

#### References

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5. Marmorstein, R., *Cell. Mol. Life Sci.*, **58**, 693-703 (2001).
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