

## Product Information

### Anti-PRMT1 (Protein Arginine Methyl Transferase 1) (TK-16)

Developed in Rabbit  
Affinity Isolated Antibody

Product Number **P 6996**

#### Product Description

Anti-PRMT1 (Protein Arginine Methyl Transferase 1) (TK-16) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 309-324 of rat PRMT1, conjugated to KLH via an N-terminal added cysteine residue. This sequence is conserved in human and rat. The antibody is affinity purified on the immunizing peptide immobilized on agarose.

Anti-PRMT1 (Protein Arginine Methyl Transferase 1) (TK-16) recognizes PRMT1 (approx. 42 kDa) from human, rat, mouse, monkey, and hamster origin by immunoblotting and immunoprecipitation. Staining of the PRMT1 band in immunoblotting is specifically inhibited by the PRMT1 immunizing peptide.

Postranslational modifications of proteins play an important role in the regulation of protein function, stability, and localization. Such modifications occur on different amino acids and include phosphorylation, glycosylation, acetylation, or methylation.<sup>1</sup> Methylation can occur at lysine or arginine.<sup>2,3</sup> The methylation of arginine is mediated by the Protein Arginine Methyl Transferase (PRMT) family of enzymes. These enzymes transfer the methyl group from S-adenosyl-L-methionine to the guanidino nitrogen atoms of an arginine residue. Arginine methylation was found to be an important modification in signal transduction, transcription, RNA transport, and splicing.<sup>4,5</sup> PRMTs are divided in two major types, I and II. Both types catalyze the formation of monomethylarginine, but differs in that Type I (including PRMT1, 3, 4, and 6) catalyzes the formation of asymmetric dimethylarginine, whereas type II (PRMT5) catalyzes the formation of symmetric dimethylarginine.<sup>6-8</sup>

PRMT1, also known as HRMT1L2 and IR1B4, was isolated through its interaction with BTG1 and TIS21, proteins that are important in cell quiescence. PRMT1 is a 361 amino acid protein; its splicing variants differ at the N-terminus, giving rise to three isoforms of 343, 361, and 347 amino acids (variants 1, 2, and 3 respectively).<sup>9,10</sup> Proteins involved in the metabolism of RNA are substrates for PRMT1, among them Sam68.

Their interaction has functional consequences, such as proper arginine methylation-dependent localization. Antibodies specific for PRMT1 are an important tool for studying the biology of PRMTs.

#### Reagent

Anti-PRMT1 (Protein Arginine Methyl Transferase 1) (TK-16) is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 1.0 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 extended storage, freeze in working aliquots. 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

By immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended using total extracts of 293-T cells.

By immunoprecipitation, 2.5-5 µg of the antibody can immunoprecipitate PRMT1 from extracts of 293-T cells.

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

#### References

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