

Product Information

Monoclonal Anti-PRMT2

Clone PRMT2-340

Purified Mouse Immunoglobulin

Product Number **P 0748**

Product Description

Monoclonal Anti-PRMT2 (mouse IgG2a isotype) is derived from the PRMT2-340 hybridoma produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 7-20 of human PRMT2, conjugated to KLH. The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-PRMT2 (Protein Arginine Methyl Transferase 2) recognizes human PRMT2 (~ 58 kDa) and does not cross react with PRMT1, 3, 4, 5, and 6. The antibody may be used in ELISA and immunoblotting.

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.¹ Methylation can occur at lysine or arginine residues.^{2,3} 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.^{4,5} PRMTs are divided in two major types, type I and type II. Both types catalyze the formation of monomethylarginine, but differ 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.⁶⁻⁸ PRMT2 was isolated based on sequence similarity to PRMT1. The protein sequence of

PRMT2 identifies it as a methyltransferase belonging to type I family of PRMTs. However, no substrate has been found for this enzyme.⁹ PRMT2 acts as a coactivator of ER α (estrogen receptor α) and enhances its transcriptional activity.¹⁰

Antibodies specific for PRMT2 are an important tool for studying the biology of PRMTs.

Reagent

Monoclonal Anti-PRMT2 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 2 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 hazardous 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. 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 0.5-1 µg/ml is recommended using a whole cell extract of 293T cells expressing human PRMT2.

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

References

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KAA/EK 10/04

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