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ProductInformation

Monoclonal Anti-PRMT3
Clone PRMT3-367
Purified Mouse Immunoglobulin

Product Number **P 9370**

Product Description

Monoclonal Anti-PRMT3 (mouse IgG3 isotype) is derived from the PRMT3-367 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 501-514 of rat PRMT3, conjugated to KLH. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-PRMT3 (Protein-Arginine Methyl Transferase 3) recognizes recognizes human, rat, and mouse PRMT3 (approx. 58 kDa) and does not cross react with PRMT1, 2, 4, 5, or 6. The antibody epitope resides within amino acids 501-514 of rat PRMT3 and may be used in various immunochemical techniques including immunoblotting, immunocytochemistry, and ELISA.

Posttranslational 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. Arginine methylation is mediated by the Protein-Arginine Methyl Transferase (PRMT) family of enzymes,[1-4] which are important in signal transduction, transcription, RNA transport, and splicing.

PRMTs are divided into two types defined by their activity. Type I PRMTs (including PRMT 1, 3, 4, and 6) are characterized by the formation of asymmetric dimethylated arginine residues. In type I PRMTs, the methylate arginine is found in different motifs such as the Arg-Gly-Gly-rich region (RGG motif) in many RNA-binding proteins or the Arg-Xaa-Arg motif in poly(A)-binding protein II. Type II PRMTs, which include only PRMT5, are defined by the formation of symmetric dimethylated arginine residues. Substrates for PRMT5 include myelin basic protein (MBP) and the spliceosomal D1 and D3 proteins.

PRMT3 is expressed in several tissues such as heart, small intestine, kidney, ovary, testis, thyroid, and cortex with a cytoplasmic localization within the cells.[1-4] PRMT3 consists of two important domains in its N-terminal region (a C2H2 zinc-finger motif and a tyrosine-phosphorylation consensus sequence), which are probably important for regulation and catalytic activity.[1-4]

Reagent

Monoclonal Anti-PRMT3 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 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

By immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended using a whole cell extract of the 293T cell line transfected with human PRMT3.

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

References

1. Tang, J., et al., J. Biol. Chem., **273**, 16935-16945 (1998).
2. Frankel, A., et al., J. Biol. Chem., **275**, 32974-32982 (2000).
3. Frankel, A., et al., J. Biol. Chem., **277**, 3537-3543 (2002).
4. Rho, J., et al., J. Biol. Chem., **276**, 11393-11401 (2001).

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