BACKGROUND

The family of Protein Arginine N-Methyltransferases (PRMTs) catalyze the sequential transfer of a methyl group from AdoMet to the side chain nitrogens of arginine residues within proteins to form methylated arginine derivatives and S-adenosyl-L-homocysteine.\(^1\) There are eleven different PRMT genes (PRMT1-11) whose biological function remains under explored. With regard to the dimethylation product, PRMTs are distinguished into type I enzymes, which catalyze the asymmetric NG,NG-dimethyl-arginine, and the type II subfamily, which consists of PRMT5, PRMT7, and PRMT9 and generates symmetric NG,NG'-dimethylation. PRMT2 was isolated based on its sequence similarity with PRMT1. So far no methyltransferase activity has been revealed for PRMT2.\(^2\) PRMTs regulate various cellular processes such as DNA repair and transcription, RNA processing, signal transduction, and nucleo-cytoplasmic localization. Like histone lysine methylation, methylation of histone arginine residues can either induce or inhibit transcription depending on the residue being modified and the type of methylation being introduced.\(^3\)

References:

TECHNICAL INFORMATION

Source:
PRMT1 Antibody is a rabbit antibody raised against a short peptide from human PRMT1 sequence.

Specificity and Sensitivity:
This antibody detects endogenous PRMT1 proteins without cross-reactivity with other family members.

Storage Buffer: Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

<table>
<thead>
<tr>
<th>Application</th>
<th>Dilution</th>
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<tbody>
<tr>
<td>WB</td>
<td>1-2 µg/mL</td>
</tr>
<tr>
<td>IP</td>
<td>2.5-5 µg</td>
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<tr>
<td>IHC</td>
<td>n.d</td>
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<tr>
<td>ICC</td>
<td>n.d</td>
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<tr>
<td>FACS</td>
<td>n/d</td>
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</tbody>
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*Optimal dilutions must be determined by end user.

QUALITY CONTROL DATA

Cell extracts were separated on SDS-PAGE and blotted with Anti-PRMT1 at 1 µg/mL and developed using Goat Anti-Rabbit IgG Peroxidase and a chemiluminescent substrate. (Left Lane) MCF7 cells; (Middle Lane) Chinese ovary cells; (Right Lane) HEK 293-T cells.