

## DESCRIPTION

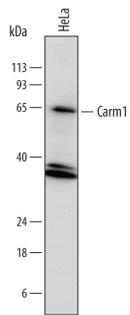
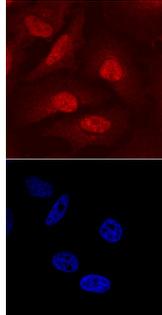
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human/Mouse   |
| <b>Specificity</b>        | Detects human Carm1 in direct ELISAs and Western blots.   |
| <b>Source</b>             | Polyclonal Goat IgG   |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Carm1<br>Lys209-Leu379<br>Accession # Q86X55  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                            | <b>Recommended Concentration</b> | <b>Sample</b> |
|----------------------------|----------------------------------|---------------|
| <b>Western Blot</b>        | 1 µg/mL                          | See Below     |
| <b>Immunocytochemistry</b> | 5-15 µg/mL                       | See Below     |

## DATA

|   |   |
|---|---|
| <p><b>Western Blot</b></p>  <p><b>Detection of Human Carm1 by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Carm1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7277) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Carm1 at approximately 63 kDa (as indicated). This experiment was conducted under reducing conditions and using <a href="#">Immunoblot Buffer Group 1</a>.</p> | <p><b>Immunocytochemistry</b></p>  <p><b>Carm1 in HeLa Human Cell Line.</b> Carm1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human Carm1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7277) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red, upper panel; Catalog # NL001) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei and cytoplasm. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p> |
|---|---|

## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Sterile PBS to a final concentration of 0.2 mg/mL.   |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

Carm1 (Coactivator-associated arginine methyltransferase 1; also PRMT4) is a 60-64 kDa member of the Arg N-methyltransferase family of enzymes. It is ubiquitously expressed, and found in the cytoplasm during mitosis, and in the nucleus during the G1, G2 and S phases of the cell cycle. Carm1 binds to nuclear receptor p160 family coactivators. When bound, it methylates DNA-associated histone H3 arginines, allowing for chromatin remodeling and gene activation. It also plays a role in pre-mRNA splicing through its methylation of splicing factors, and regulates the stability of RNA-binding proteins. Human Carm1 is 608 amino acids (aa) in length. It contains one catalytic site between aa 184-394, and a transactivation domain at the C-terminus (aa 499-608). There is one automethylation site at Arg550, and a phosphorylation site at Ser216 that, when utilized, promotes cytosolic localization. Carm1 likely forms homodimers. There are three potential isoform variants. One shows an alternative start site at Met378, a second possesses a 16 aa substitution for aa 369-608, and a third contains a deletion of aa 539-561. Over aa 209-379, human and mouse Carm1 are identical in aa sequence.