

Product no **AS21 4559****5MeC | 5-Methylcytosine (clone 5MC-CD)**

## Product information

<b>Immunogen</b>	BSA-conjugated 5-Methylcytosine
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Subclass/isotype</b>	IgM
<b>Purity</b>	Purified IgM in PBS. Contains 50 % glycerol, filter sterilized.
<b>Format</b>	Liquid
<b>Quantity</b>	100 µg
<b>Storage</b>	Store at -20 °C; make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.

## Application information

**Recommended dilution** | 1:50 - 1: 100 (IF), 1 : 1000 (WB)**Confirmed reactivity** | *Chlamydomonas* me-1 cells, mouse embryonic stem cells**Predicted reactivity** | DNA with 5-Methylcytosine (methylated DNA)

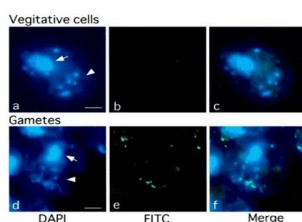
**Selected references**

[Sharif et al. \(2007\)](#) The SRA protein Np95 mediates epigenetic inheritance by recruiting Dnmt1 to methylated DNA. *Nature*. 2007 Dec 6;450(7171):908-12. doi: 10.1038/nature06397. Epub 2007 Nov 11. PMID: 17994007.

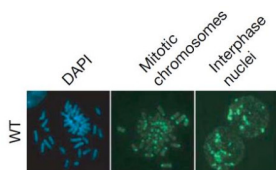
[Nishiyama et al. \(2002\)](#) A chloroplast-resident DNA methyltransferase is responsible for hypermethylation of chloroplast genes in *Chlamydomonas* maternal gametes. *Proc Natl Acad Sci U S A*. 2002 Apr 30;99(9):5925-30. doi: 10.1073/pnas.082120199. PMID: 11983892; PMCID: PMC122878.

[Sano, Imokawa & Sager \(1988\)](#) Detection of heavy methylation in human repetitive DNA subsets by a monoclonal antibody against 5-methylcytosine. *Biochim Biophys Acta*. 1988 Nov 10;951(1):157-65. doi: 10.1016/0167-4781(88)90036-x. PMID: 2847796.

[Sano, Royer & Sager \(1980\)](#) Identification of 5-methylcytosine in DNA fragments immobilized on nitrocellulose paper. *Proc Natl Acad Sci U S A*. 1980 Jun;77(6):3581-5. doi: 10.1073/pnas.77.6.3581. PMID: 6251470; PMCID: PMC349661.

Methylation of chloroplast DNA of *Chlamydomonas* me-1 cells, visualized by anti-5-methylcytosine antibodies.

Left: DAPI stained cells. Middle: Cells stained with anti-5MeC antibodies, followed by secondary anti-mouse IgM, FITC conjugated secondary antibodies, Right: Merged image.

Chloroplast DNA is exclusively methylated in gamete cells. Described in [Nishiyama et al. 2002](#).Intense 5-methylcytosine staining at pericentromeric regions of mouse embryonic stem cells was seen in the mitotic chromosome and interphase nuclei of ESCs. Described in [Sharif et al. 2007](#).