

Datasheet for ABIN2451915
anti-5-Methylcytosine antibody



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Overview

Quantity:	100 µg
Target:	5-Methylcytosine
Reactivity:	Please inquire
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	Un-conjugated
Application:	Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	5-Methylcytosine conjugated to bovine serum albumin
Clone:	5MC-CD
Isotype:	IgM
Purification:	Purified
Sterility:	Sterile filtered

Target Details

Target:	5-Methylcytosine
Alternative Name:	5 Methylcytosine
Target Type:	Chemical
Background:	DNA methylation is a type of chemical modification of DNA that can be inherited and

Target Details

subsequently removed without changing the original DNA sequence. Therefore it is part of the epigenetic code and is also the most well characterized epigenetic mechanism. DNA methylation results in addition of a methyl group to DNA - for example, to the number 5 carbon of the cytosine pyrimidine ring - which involves reduction in gene expression. In adult somatic tissues, DNA methylation typically occurs in a CpG dinucleotide context, non-CpG methylation is prevalent in embryonic stem cells. This hybridoma has been constructed by Prof. H. Sano.

Application Details

Application Notes: 1) Immunocytochemistry: ~50-100 fold dilution
 2) Immuno-blotting detection of DNA with 5-methylcytosine on nitrocellulose: ~1000 fold dilution
 Not tested with other application

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 mg/mL

Buffer: PBS with 50 % Glycerol

Preservative: Azide free

Storage: -20 °C/-80 °C

Storage Comment: -20 C (For long term storage: -80 C)

Publications

Product cited in: Sharif, Muto, Takebayashi, Suetake, Iwamatsu, Endo, Shinga, Mizutani-Koseki, Toyoda, Okamura, Tajima, Mitsuya, Okano, Koseki: "The SRA protein Np95 mediates epigenetic inheritance by recruiting Dnmt1 to methylated DNA." in: **Nature**, Vol. 450, Issue 7171, pp. 908-12 , (2007) ([PubMed](#)).

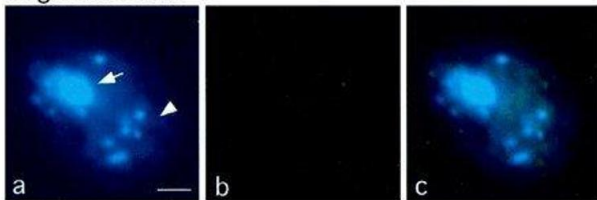
Nishiyama, Ito, Yamaguchi, Koizumi, Sano: "A chloroplast-resident DNA methyltransferase is responsible for hypermethylation of chloroplast genes in Chlamydomonas maternal gametes." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 99 , Issue 9, pp. 5925-30, (2002) ([PubMed](#)).

Sano, Imokawa, Sager: "Detection of heavy methylation in human repetitive DNA subsets by a monoclonal antibody against 5-methylcytosine." in: **Biochimica et biophysica acta**, Vol. 951, Issue 1, pp. 157-65, (1988) ([PubMed](#)).

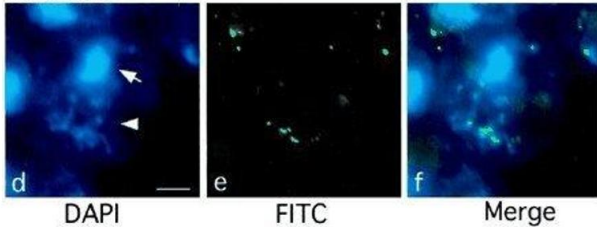
Sano, Royer, Sager: "Identification of 5-methylcytosine in DNA fragments immobilized on nitrocellulose paper." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 77, Issue 6, pp. 3581-5, (1980) ([PubMed](#)).

Images

Vegetative cells



Gametes

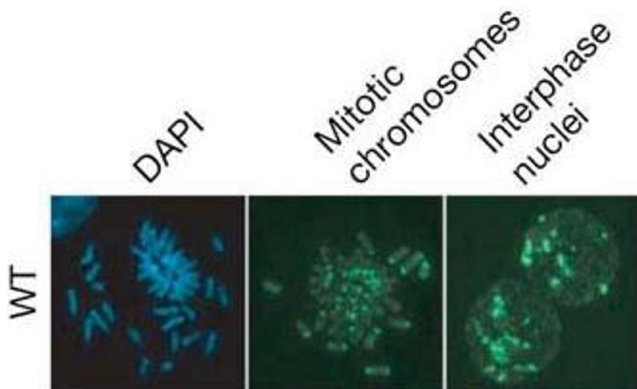


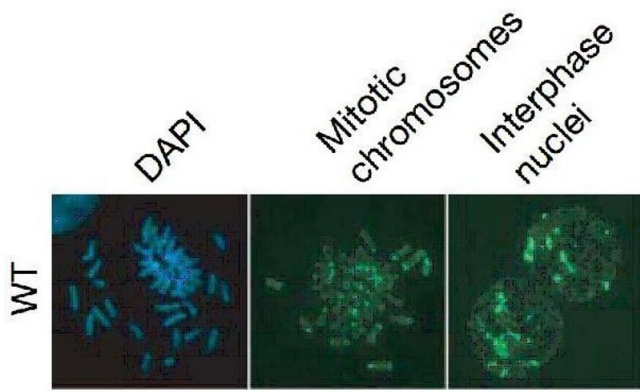
Immunofluorescence

Image 1.

Immunofluorescence

Image 2.





Immunofluorescence

Image 3.