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# 5-Methylcytosine

National Cancer Institute

## Source

National Cancer Institute. *5-Methylcytosine*. NCI Thesaurus. Code C129008.

A methylated form of the nucleobase cytosine occurring predominantly in cytosine-phosphate-guanine (CpG) islands that are produced by DNA methyltransferases and may regulate gene expression. Like cytosine, the DNA sequence containing 5-methylcytosine (5-mC) is able to be replicated without error and 5-mC can pair with guanine in double stranded DNA. However, DNA sequences containing a high local concentration of 5-mC may be less transcriptionally active than areas with higher ratios of unmodified cytosine.