SM1872PS  

**Monoclonal Antibody to 5-Methyl Cytosine / 5-MeC - Purified**

**Alternate names:** 5-MeCyd, 5-Methyl Cytidine, 5-Methylcytidine, 5MeC

**Quantity:** 50 µg

**Concentration:** 1.0 mg/ml

**Background:** Cytosine is a nucleobase whilst cytidine is a molecule (known as a nucleoside) that is formed when Cytosine is attached to a Ribose ring (also known as a Ribofuranose) via a beta-N1-glycosidic bond.

**Host / Isotype:** Mouse / IgG1

**Recommended Isotype Controls:** SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N

**Clone:** 33D3

**Immunogen:** Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/0Ag 14 myeloma cell line

**Format:**
- **State:** Liquid purified IgG fraction
- **Purification:** Affinity Chromatography on Protein A
- **Buffer System:** 10 mM PBS, pH 7.4
- **Preservatives:** 0.01% Thimerosal

**Applications:**
- **Flow Cytometry:** Membrane permeabilisation may be required for this application. Cell pretreatment before staining is described in Ref.4 (Giraldo, A. M. et al.)
- **Immunoblotting.**
- **Immunofluorescence.**
- **Immunohistochemistry on Frozen and Paraffin Embedded Sections:** This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose. This antibody has been reported for use in Methylated DNA Immunoprecipitation (MeDIP).
- Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:** This antibody recognises the modified base 5-Methylcytidine (5-MeCyd) found in DNA of plants and vertebrates. DNA methylation is a DNA modification process, which is involved in the control of gene expression. Clone 33D3 has been developed to discriminate between the modified base 5-MeCyd and the normal counterpart Cytosine. Reports suggest that in tumours, DNA is frequently globally hypomethylated compared to the DNA from normal tissue.

**Species Reactivity:**
- **Tested:** Human, Rat and Mouse.

**Storage:** Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:


