

5-Hydroxymethylcytosine antibody

Catalog No.: RA9001

Basic Information

Observed MW

17kDa

Calculated MW

16kDa

Category

Primary antibody

Applications

DB, FC, ICC, IF, IHC, MeDIP

Cross-Reactivity

Human, Mouse, Not Species Specific

Background

Active Motif offers two polyclonal antibodies that recognize 5-hydroxymethylcytosine, a whole serum version (39769) and a purified IgG version (39791). Both are validated for use in methyl DNA immunoprecipitation (MeDIP). For customers who must quantitate the amount of IgG in the MeDIP reaction, the purified IgG version (39791) is recommended. The whole serum version (39769) is very high titre, so should be used carefully (0.1 - 0.5 ul per IP) to prevent non-specific background. The whole serum version (39769) has been used successfully in immunofluorescence (IF, Ito et al, 2010); the purified IgG version (39791) is likely to work in IF as well. DNA methylation is an epigenetic event in which DNA methyltransferases (DNMTs) catalyze the reaction of a methyl group to the fifth carbon of cytosine in a CpG dinucleotide. This modification helps to control gene expression and is also involved in genomic imprinting, while aberrant DNA methylation is often associated with disease.

Recommended Dilutions

DB	1:10000
ICC/IF	
MeDIP	0.1-0.5 μ l/IP

Product Information

Source	Rabbit
Isotype	Serum
Purification	None
Storage buffer	Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.
Storage Conditions	Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage.

Note: For in vitro research use only, not for diagnostic or therapeutic use, This product is not a medical device.

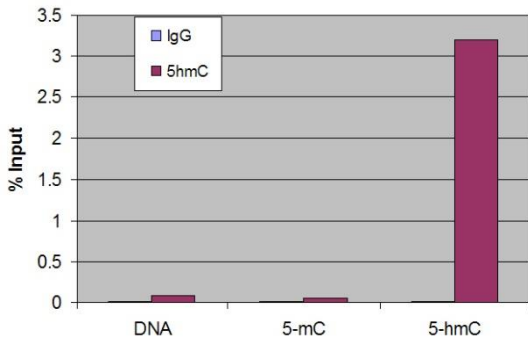
注意:在体外研究使用, 不用于诊断或治疗用途, 本产品不是医疗装置!

Web: www.ruisbio.com

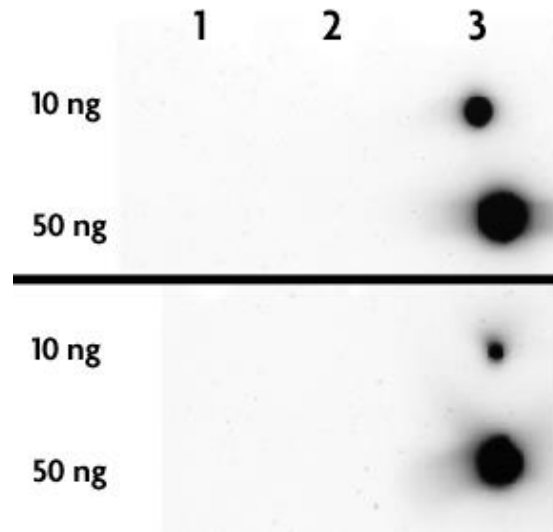
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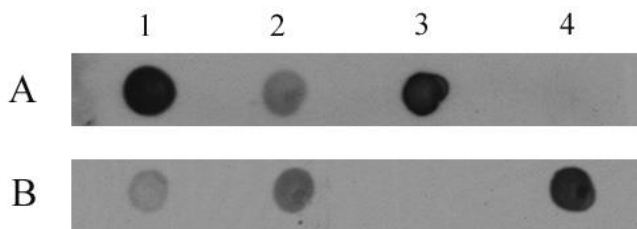




5-Hydroxymethylcytosine (5-hmC, 5-hydroxymethylcytidine) antibody tested by Methyl DNA immunoprecipitation. DNA (25 µg) derived from the promoter of the APC gene was spiked into 500 ng of human genomic DNA and subjected to the MeDIP procedure using 1 µl of 5-Hydroxymethylcytidine antibody (5hmC, maroon bars) or 1 µl of control rabbit IgG (IgG, blue bars). Real time quantitative PCR was performed on the immunoprecipitated DNA and results plotted as % of input DNA. The spiked APC DNA contained either no methylation (DNA), 5-methylcytosine methylation (5-mC) or 5-hydroxymethylcytosine methylation (5-hmC).



5-Hydroxymethylcytosine (5-hmC, 5-hydroxymethylcytidine) antibody tested by dot blot analysis. DNA samples (10 ng or 50 ng as indicated) were spotted onto positively charged nylon membrane and blotted with 5-Hydroxymethylcytidine antibody at a dilution of 1:10,000. Top Panel: Double stranded DNA. Bottom Panel: Single stranded DNA. Lane 1: Unmethylated DNA. Lane 2: DNA containing 5-methylcytosine. Lane 3: DNA containing 5-hydroxymethylcytosine.



5-Hydroxymethylcytosine (5-hmC, 5-hydroxymethylcytidine) antibody tested by dot blot analysis. DNA samples were spotted onto positively charged nylon membrane and blotted with antibodies as indicated. Panel A: 5-Hydroxymethylcytidine antibody recognizing 5-hydroxymethylcytosine (1:10,000 dilution). Panel B: 5-Methylcytidine antibody (1:1,000 dilution). Lane 1: DNA derived from mouse embryonic stem cells (150 ng). Lane 2: DNA derived from mouse spleen (600 ng). Lane 3: 27 base oligonucleotide containing 5-hydroxymethylcytosine (1.2 ng). Lane 4: 33 base oligonucleotide containing 5-methylcytosine (2000 ng).

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