Datasheet for ABIN2668979

anti-5-Hydroxymethylcytosine antibody

3 Images | 3 Publications

Go to Product page

Overview

Quantity:	100 µg
Target:	5-Hydroxymethylcytosine (5-hmC)
Host:	Mouse
Clonality:	Monoclonal
Application:	Dot Blot (DB), Hydroxymethylated DNA immunoprecipitation (hmeDIP), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	This 5-Hydroxymethylcytosine antibody was raised against 5-hydroxymethylcytidine conjugated to KLH and recognizes 5-hydroxymethylcytosine.
Clone:	59-1
Isotype:	IgG2a
Purification:	Protein G Chromatography

Target Details

Target:	5-Hydroxymethylcytosine (5-hmC)
Alternative Name:	5-Hydroxymethylcytosine (5-hmC Products)
Target Type:	Chemical

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.

Application Details

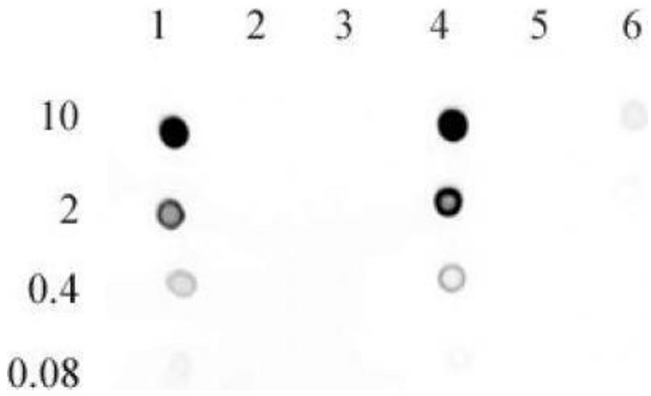
Restrictions:	For Research Use only

Handling

Concentration:	1 µg/µL
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
Storage:	-20 °C
Storage Comment:	Antibodies in solution can be stored at -20 °C for 2 years.
Expiry Date:	6 months

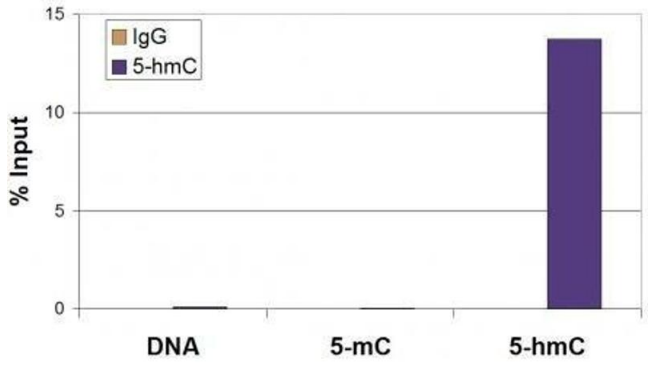
Publications

Product cited in:	Jia, Li, Cong, Yang, Sun, Parvizi, Zhao: "Maternal low-protein diet affects epigenetic regulation of hepatic mitochondrial DNA transcription in a sex-specific manner in newborn piglets associated with GR binding to its promoter." in: **PLoS ONE**, Vol. 8, Issue 5, pp. e63855, (2013) (PubMed). Li, ONeill: "5'-Methylcytosine and 5'-hydroxymethylcytosine each provide epigenetic information to the mouse zygote." in: **PLoS ONE**, Vol. 8, Issue 5, pp. e63689, (2013) (PubMed). Li, Zou, Jia, Zhao: "Glucocorticoid receptor is involved in the breed-dependent transcriptional regulation of mtDNA- and nuclear-encoded mitochondria genes in the liver of newborn piglets." in: **BMC veterinary research**, Vol. 9, pp. 87, (2013) (PubMed).



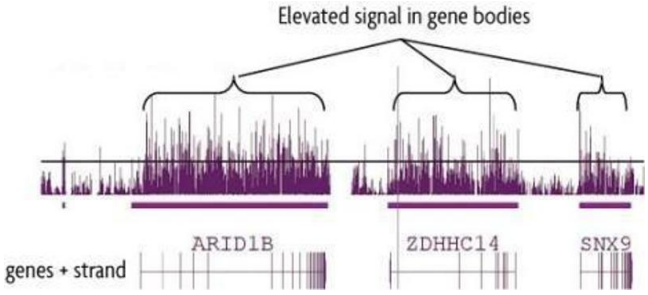
Dot Blot

Image 1. 5-Hydroxymethylcytosine (5-hmC) antibody (mAb) tested by dot blot analysis. DNA samples were spotted (indicated in ng on the left) on to a positively charged nylon membrane and blotted with 5-Hydroxymethylcytidine antibody at a 0.2 µg/ml dilution. Lane 1: double-stranded DNA containing 5-hydroxymethylcytosine. Lane 2: double-stranded DNA containing 5-methylcytosine. Lane 3: unmethylated double-stranded DNA. Lane 4: single-stranded DNA containing 5-hydroxymethylcytosine. Lane 5: single-stranded DNA containing 5-methylcytosine. Lane 6: unmethylated single-stranded DNA.



Methylated DNA Immunoprecipitation

Image 2. 5-Hydroxymethylcytosine (5-hmC, 5-hydroxymethylcytidine) antibody tested by Methyl DNA immunoprecipitation. DNA (25 pg) derived from the promoter of the APC gene was spiked into 500 ng of human genomic DNA and subjected to the MeDIP procedure using 2 µg of 5-Hydroxymethylcytidine antibody (5hmC, maroon bars) or 2 µg 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).



Chromatin Immunoprecipitation

Image 3. hMeDIP-chip performed on human brain DNA using 5-Hydroxymethylcytosine (5-hmC) antibody. Human brain DNA (2 µg) was immunoprecipitated with 10 µg of 5-Hydroxymethylcytosine antibody. Following hMeDIP, the DNA was amplified, labeled and hybridized to an Affymetrix Human Tiling 2.0R Array. Shown is a region from chromosome 6q containing the ARID1B, ZDHHC14 and SNX9 genes. The results show that 5-hydroxymethylcytosine is enriched primarily in the coding regions of genes, rather than in the gene promoter or regulatory regions.