

### 5-hmC polyclonal antibody (rabbit)

Rabbit Polyclonal Antibody Catalog # ABV11365

#### **Specification**

# 5-hmC polyclonal antibody (rabbit) - Product Information

Application Reactivity Host

Host Clonality Isotype E, IP, DB

Human, Mouse Rabbit

**ELISA: Peptide, hmEdIP, Dot blot: Peptides.** 

Polyclonal
Rabbit IgG

#### 5-hmC polyclonal antibody (rabbit) - Additional Information

Positive Control Application & Usage

tation & Usage hMeDIP: 2.5 µg/IP, Dot Blot: 1:200, ELISA: 1:500.

**Other Names** 

5-hydroxymethylcytosine

**Target/Specificity** 

5-hmC

**Antibody Form** 

Liquid

**Appearance** 

Colorless liquid

**Formulation** 

In PBS with 0.05% (W/V) sodium azide.

**Handling** 

The antibody solution should be gently mixed before use.

**Reconstitution & Storage** 

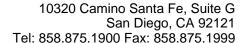
-20 °C

**Background Descriptions** 

#### **Precautions**

5-hmC polyclonal antibody (rabbit) is for research use only and not for use in diagnostic or therapeutic procedures.

## 5-hmC polyclonal antibody (rabbit) - Protein Information





### 5-hmC polyclonal antibody (rabbit) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

## 5-hmC polyclonal antibody (rabbit) - Images

# 5-hmC polyclonal antibody (rabbit) - Background

5-hydroxymethylcytosine (5-hmC) has been recently discovered in mammalian DNA. This results from the enzymatic conversion of 5-methylcytosine into 5-hydroxymethylcytosine by the TET family of oxygenases. Initially, the 5-hmC bases have been identified in Purkinje neurons, in granule cells and embryonic stem cells where they are present at high levels (up to 0.6% of total nucleotides in Purkinje cells). A recent report indicates that 5-hmC is abundant in brain tissue, especially in areas that are associated with higher cognitive functions. Preliminary results indicate that 5-hmC may have important roles distinct from 5-mC. Although its precise role has still to be shown, early evidence suggests a few putative mechanisms that could have big implications in epigenetics: 5-hydroxymethylcytosine may well represent a new pathway to demethylate DNA involving a repair mechanism converting 5-hmC to cytosine and, as such open up entirely new perspectives in epigenetic studies Due to the structural similarity between 5-mC and 5-hmC, these bases are experimentally almost indistinguishable. Recent articles demonstrated that the most common approaches (e.g. enzymatic approaches, bisulfite sequencing) do not account for 5-hmC. The development of the affinity-based technologies appears to be the most powerful way to differentially and specifically enrich 5-mC and 5-hmC sequences. The results shown here illustrate the use of this unique rabbit polyclonal antibody against 5-hydroxymethylcytosine that has been fully validated in various technologies.