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5-hmC polyclonal antibody (rabbit)

Rabbit Polyclonal Antibody
Catalog # ABV11365

Specification

5-hmC polyclonal antibody (rabbit) - Product Information

Application	**E, IP, DB**
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

5-hmC polyclonal antibody (rabbit) - Additional Information

Positive Control Application & Usage	**ELISA: Peptide, hmEdIP, Dot blot: Peptides. 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

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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
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- 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.