

# Anti-5-Hydroxymethylcytosine (5hmc) [AB3/63.3] mAb

**Catalogue number:** 152733

**Sub-type:** Primary antibody

**Images:**

## Contributor

**Inventor:** Wolf Reik

**Institute:** Babraham Institute

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Anti-5-Hydroxymethylcytosine (5hmc) [AB3/63.3] mAb

**Alternate name:**

**Class:** Monoclonal

**Conjugate:** Unconjugated

**Description:** The anti-5-Hydroxymethylcytosine antibody, clone AB3/63.3, detects 5-hydroxymethyl cytosine (hmc, 5hmc), but not 5-methylcytosine or unmethylated cytosine. 5-Hydroxymethylcytosine is a DNA pyrimidine nitrogen base. It is formed from the DNA base cytosine by adding a methyl group and then a hydroxy group. Every mammalian cell contains 5-hydroxymethylcytosine, but the levels vary depending on the cell type; generally, the levels of 5-hydroxymethylcytosine increase with age. Although the exact function has not been fully elucidated, studies suggest that 5-hydroxymethylcytosine may regulate gene expression or initiate DNA demethylation.

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:**

**Gender:**

**Isotype:** IgG2a kappa

**Reactivity:** All

**Selectivity:**

**Host:** Rat

**Immunogen:** 5-Hydroxymethylcytosine conjugated to BSA

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:**

**Formulation:**

**Recommended controls:** Unmodified DNA, 5-Methylcytosine DNA, and 5-hydroxymethylcytosine DNA

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Target details

**Target:** 5-Hydroxymethylcytosine (5hmC)

**Target alternate names:**

**Target background:** The anti-5-Hydroxymethylcytosine antibody, clone AB3/63.3, detects 5-hydroxymethyl cytosine (hmc, 5hmc), but not 5-methylcytosine or unmethylated cytosine. 5-Hydroxymethylcytosine is a DNA pyrimidine nitrogen base. It is formed from the DNA base cytosine by adding a methyl group and then a hydroxy group. Every mammalian cell contains 5-hydroxymethylcytosine, but the levels vary depending on the cell type; generally, the levels of 5-hydroxymethylcytosine increase with age. Although the exact function has not been fully elucidated, studies suggest that 5-hydroxymethylcytosine may regulate gene expression or initiate DNA demethylation.

**Molecular weight:**

**Ic50:**

## Applications

**Application:** IF ; IP ; DB

**Application notes:**

## Handling

**Format:** Liquid

**Concentration:** 1 mg/ml

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:** PBS with 0.02% azide

**Storage conditions:** -20° C

**Shipping conditions:**

Shipping at 4° C

## Related tools

**Related tools:**

## References

**References:** Sensitive detection of DNA modifications induced by cisplatin and carboplatin in vitro and in vivo using a monoclonal antibody. ; Original hybridoma first published in: Tilby et al. 1991. Cancer Res. 51(1):123-9. PMID: 1703029.

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