

**Rabbit Anti-Histone H3 Tri-Methyl Lys27/H3K27Me3 [MD48R]: RM0115**

**Intended Use:** For Research Use Only

**Description:** The Histone H3 is one of the five main histone proteins involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and a long N-terminal tail, H3 is involved with the structure of the nucleosomes of the 'beads on a string' structure. The N-terminal tail of histone H3 protrudes from the globular nucleosome core and can undergo several different types of epigenetic modifications that influence cellular processes. These modifications include the covalent attachment of methyl or acetyl groups to lysine and arginine amino acids and the phosphorylation of serine or threonine. Arginine methylation of histones H3 (Arg2, 17, 26) and H4 (Arg3) promotes transcriptional activation and is mediated by a family of protein arginine methyltransferases (PRMTs), including the co-activators PRMT1 and CARM1 (PRMT4). In contrast, a more diverse set of histone lysine methyltransferases have been identified, all but one of which contain a conserved catalytic SET domain originally identified in the *Drosophila* Su(var)3-9, Enhancer of zeste and Trithorax proteins. Lysine methylation occurs primarily on histones H3 (Lys4, 9, 27, 36, 79) and H4 (Lys20) and has been implicated in both transcriptional activation and silencing. Methylation of these lysine residues coordinates the recruitment of chromatin modifying enzymes containing methyl-lysine binding modules such as chromodomains (HP1, PRC1), etc.

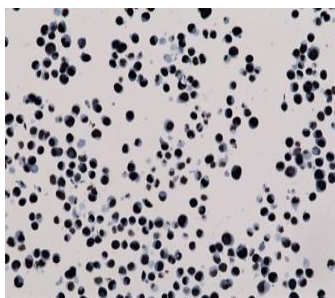
**Specifications**

Clone: MD48R  
 Source: Rabbit  
 Isotype: IgG  
 Reactivity: Human  
 Immunogen: Synthetic peptide corresponding to Trimethyl-Histone H3 (Lys27)  
 Localization: Cytoplasm  
 Formulation: Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, ELISA, ICC/IF, WB  
 Package:

| Description                                       | Catalog No. | Size |
|---|-------------|------|
| Histone H3 Tri-Methyl Lys27/H3K27Me3 Concentrated | RM0115      | 1 ml |

**IHC Procedure**

Positive Control Tissue: Lymphoma  
 Concentrated Dilution: 10-50  
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual  
 \* Result should be confirmed by an established diagnostic procedure.



HepG2 cells stained with anti-Histone H3 Tri-Methyl Lys27

**References:**

1. Genome encode analyses reveal the basis of convergent evolution of fleshy fruit ripening. *Nat Plants*. 10.1038, 2018.
2. Melamine negatively affects oocyte architecture, oocyte development and fertility in mice. Duan X1, et al. *Hum Reprod*. Jul;30(7):1643-52, 2015. Lu P et al.

Doc. 100-RM0115  
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