

**Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody**  
**Histone H3 K4me2/phospho T6 Antibody**  
**Catalog # ASR5742****Specification****Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Rat, Human, Mouse
Clonality	Polyclonal
Application	WB, IHC, E, IP, I, LCI
Application Note	Anti-Histone H3 [Dimethyl Lys4/pT6] antibody is tested for CHIP, immunocytochemistry, dot blot, and Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4kDa corresponding to the appropriate cell lysate or extract. Epi-Plus™ antibody production in collaboration with Novus Biologicals.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Histone H3 [Dimethyl Lys4/pT6] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide surrounding the K4me2/pT6 site of human Histone H3.
Stabilizer	30% Glycerol
Preservative	0.01% (w/v) Sodium Azide

**Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Additional Information****Gene ID** 126961;333932;653604**Purity**

Anti-Histone H3 [Dimethyl Lys4/pT6] was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, rat, and C. elegans based on 100% sequence homology. Cross-reactivity with Histone H3 [Dimethyl Lys4/pT6] from other sources has not been determined.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

**Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Protein Information**

**Name** H3C15 ([HGNC:20505](#))

**Function**

Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.

**Cellular Location**

Nucleus. Chromosome.

**Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Images****Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - Background**

The nucleosome is comprised of 146 bp of DNA wrapped around a series of histone proteins arranged as an octamer consisting of 2 copies of histone H2A, H2B, H3 and H4. Within the nucleosome core the histone proteins are covalently modified at specific residues predominantly within the N-terminal tail including lysine (acetylation, methylation, SUMOylation, and ubiquitylation), arginine methylation and citrullination, serine and threonine phosphorylation, as well as proline isomerization. The lysine side chains can carry up to three methyl groups (mono-, di- and tri- methylated forms) and the arginine side chain can be monomethylated or can be dimethylated as the symmetric or asymmetric forms. The modifications show temporal, disease-specific, and other types of cell-specific regulation and there are specific families of enzymes that regulate the methylation, demethylation, acetylation, deacetylation and other modifications. Research has indicated that whereas the histone mark H3K4Me3 (tri-methyl lysine 4 of histone H3) localizes to gene promoter regions (it is associated with transcriptional activation) other modifications at H3K4 such as monomethyl is present predominantly at enhancer sequences. Specific marks have been shown to be associated with the activation (H3K9Me1, H3K27Me1, and H4K20Me1) or repression (H3K9Me2 and Me3, H3K27Me2 and Me3, and H4K20Me2 and Me3) of genes. Monomethylation of H4 at K20, catalyzed by SET8, is essential to genome replication and stability. Multiple DNA breaks are associated with demethylation at this site, resulting in activation of p53 to avoid mitosis and aberrant chromosomal activity. In mammalian stem cells, Xist expression blocks the formation of H4K20me1, which is one of the first examples of a direct connection between chromatin and stem cell differentiation. Anti-Histone H3 are ideal for

researchers interested in Chromatin Research, Epigenetics, Chromatin Modifiers, Histones and Modified Histones, and Phospho Specific research.