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# Anti-Histone H3 [p Thr3, Monomethyl Lys4] (RABBIT) Antibody

**Histone H3 K4me1/phospho T3 Antibody**
**Catalog # ASR5614**

## Specification

### Anti-Histone H3 [p Thr3, Monomethyl Lys4] (RABBIT) Antibody - Product Information

| | |
|---|---|
| Host | **Rabbit** |
| Conjugate | **Unconjugated** |
| Target Species | **Human** |
| Reactivity | **Human, Mouse** |
| Clonality | **Polyclonal** |
| Application | **WB, IHC, I, LCI** |
| Application Note | **Anti-Histone H3 K4me1/pT3 Antibody is tested for Western Blot, Dot Blot, and Immunocytochemistry/Immunofluorescence. This antibody is suitable for Chromatin Immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4 kDa corresponding to Histone H3 protein by Western Blotting in HeLa histone prep lysate or 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 [p Thr3, Monomethyl Lys4] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic monomethylated/phosphorylated peptides surrounding Lysine 4 and Threonine 3 of human Histone H3.2.** |
| Stabilizer | **30% Glycerol** |
| Preservative | **0.01% (w/v) Sodium Azide** |

### Anti-Histone H3 [p Thr3, Monomethyl Lys4] (RABBIT) Antibody - Additional Information

**Gene ID** 126961;333932;653604

**Other Names**
126961

**Purity**
Anti-Histone H3 [p Thr3, Monomethyl Lys4] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H3.2. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and C. elegans. Predicted to react with many species including rat, chicken, Xenopus, Drosophila, and plant based on 100% sequence

homology. Cross-reactivity with Histone H3 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 [p Thr3, Monomethyl Lys4] (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.

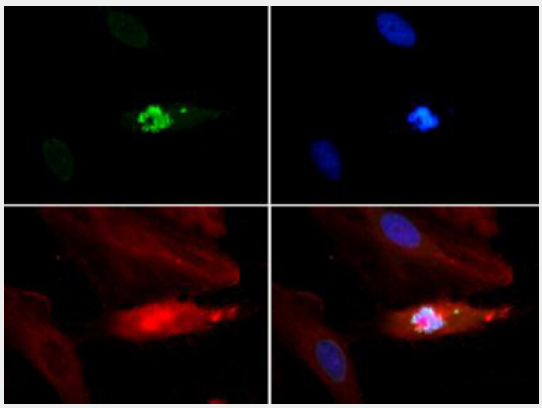
**Cellular Location**
Nucleus. Chromosome.

## Anti-Histone H3 [p Thr3, Monomethyl Lys4] (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 Cytomety
- Cell Culture

## Anti-Histone H3 [p Thr3, Monomethyl Lys4] (RABBIT) Antibody - Images



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Immunofluorescence Microscopy of Rabbit Anti-Histone H3 [p Thr3, Monomethyl Lys4] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [p Thr3, Monomethyl Lys4] antibody at a 1:100 dilution for 1 h at RT. Secondary antibody: Dylight 488 secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [p Thr3, Monomethyl Lys4] is nuclear and chromosomal. Staining: Histone H3 [p Thr3, Monomethyl Lys4] is expressed in green while the nuclei and alpha-tubulin were coexpressed with DAPI (blue) and Dylight 550 (red).

**Anti-Histone H3 [p Thr3, Monomethyl Lys4] (RABBIT) Antibody - Background**

Chromatin is the arrangement of DNA and proteins in which chromosomes are formed. Correspondingly, chromatin is formed from nucleosomes, which are comprised of a set of four histone proteins (H2A, H2B, H3, H4) wrapped with DNA. Chromatin is a very dynamic structure in which numerous post-translational modifications work together to activate or repress the availability of DNA to be copied, transcribed, or repaired. These marks decide which DNA will be open and commonly active (euchromatin) or tightly wound to prevent access and activation (heterochromatin). Common histone modifications include methylation of lysine and arginine, acetylation of lysine, phosphorylation of threonine and serine, and sumoylation, biotinylation, and ubiquitylation of lysine. In particular, methylation of lysine 4 on H3 (H3 K4Me) and phosphorylation of threonine 3 (H3 pT3) are known marks of transcriptional activation and mitosis, respectively. While H3K4 has many known modifying enzymes (Set1, Set7/9, MLL, ASH1), Haspin is the only known modifier for H3T3. Recent findings also demonstrate that pT3 can promote binding of survivin in the nucleosome. Anti-Histone H3 are ideal for researchers interested in Chromatin Research, Epigenetics, Chromatin Modifiers, Histones and Modified Histones.