

Anti-Histone H3 [ac Lys4, p Thr3] (RABBIT) Antibody
Histone H3 phospho T3/K4ac Antibody
Catalog # ASR5616**Specification**

Anti-Histone H3 [ac Lys4, p Thr3] (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 [ac Lys4, p Thr3] antibody is tested for Western Blot, Immunocytochemistry/Immunofluorescence, and Dot Blot. This antibody is useful in 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 [ac Lys4, p Thr3] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with synthetic acetylated/phosphorylated peptide surrounding Lysine 4 and Threonine 3 of human Histone H3.
Stabilizer	30% Glycerol
Preservative	0.01% (w/v) Sodium Azide

Anti-Histone H3 [ac Lys4, p Thr3] (RABBIT) Antibody - Additional Information**Gene ID** 126961;333932;653604**Other Names**
126961**Purity**

Anti-Histone H3 [ac Lys4, p Thr3] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H3. 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 [ac Lys4, p Thr3] (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.

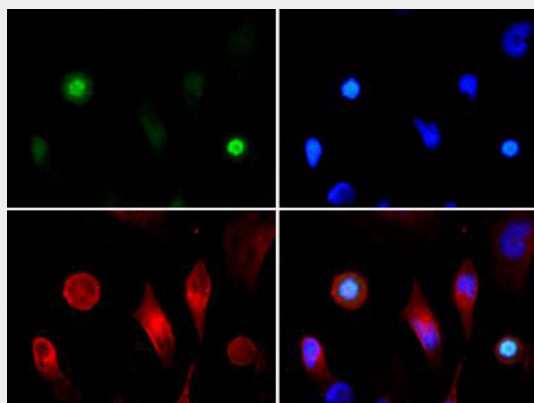
Cellular Location

Nucleus. Chromosome.

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

Immunofluorescence Microscopy of Rabbit Anti-Histone H3 [ac Lys4, p Thr3] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [ac Lys4, p Thr3] 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 [ac Lys4, p Thr3] is nuclear and chromosomal. Staining: Histone H3 [ac Lys4, p Thr3] is expressed in green while the nuclei and alpha-tubulin were coexpressed with DAPI (blue) and Dylight 550 (red).

Anti-Histone H3 [ac Lys4, p Thr3] (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. Phosphorylation of threonine 3 (H3 pT3) is a known mitotic marker and modified by the Haspin/Thr3 enzyme, while acetylation of lysine 4 (H3K4ac) on histone 3 is associated with transcriptional activation by Esa1. Methylation that occurs on H3K4 concurrently with acetylation seems to act as an adjuster to the activation effects of acetylation. Shugoshin protein cannot bind to the centromere of active cells when H3K4 is acetylated, which reduces dimethylation, and thus slows meiosis and mitosis. Usually, H3K4Ac is a transitional modification, and will become further modified with methylation as transcription progresses, indicating complex transcriptional regulation. Anti-Histone H3 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics research.