

Anti-Histone H3 [ac Lys4] (RABBIT) Antibody
Histone H3 K4ac Antibody
Catalog # ASR5620**Specification****Anti-Histone H3 [ac 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 [ac Lys4] antibody is tested for Western Blot, Immunocytochemistry, Immunofluorescence, Chromatin Immunoprecipitation, and Dot Blot. 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] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic acetylated peptide surrounding Lysine 4 of human Histone H3.2.
Stabilizer	30% Glycerol
Preservative	0.01% (w/v) Sodium Azide

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

Anti-Histone H3 [ac 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 [ac 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.

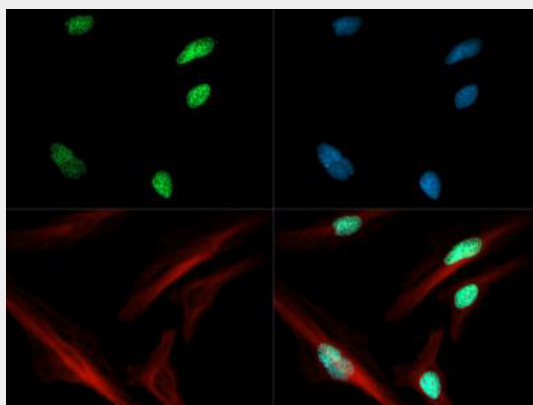
Cellular Location

Nucleus. Chromosome.

Anti-Histone H3 [ac 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 Cytometry](#)
- [Cell Culture](#)

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

Immunofluorescence of Rabbit Anti-Histone H3 [ac Lys4] Antibody. Tissue: HeLa cells. Fixation:

0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [ac Lys4] antibody at a 1:50 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] is nuclear and chromosomal. Staining: Histone H3 [ac Lys4] is expressed in green and the nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 566 (red).

Anti-Histone H3 [ac Lys4] (RABBIT) Antibody - Background

In transcription, H3K4Ac is prevalent at the promoters of active genes. Usually, this modification peaks in the cell cycle after dimethylation of H3K9 occurs, which indicates that there are sequential actions of these two modifications. 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.