

**Anti-Histone H4 [p Ser1] (RABBIT) Antibody**  
**Histone H4 phospho S1 Antibody**  
**Catalog # ASR5655**

**Specification**

**Anti-Histone H4 [p Ser1] (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, I, LCI
Application Note	Anti-Histone H4 [p Ser1] antibody is tested for Western Blot, Dot Blot, Chromatin Immunoprecipitation, Immunocytochemistry, and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~13 kDa corresponding to Histone H4 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 H4 [p Ser1] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic phosphorylated peptide surrounding Serine 1 of human Histone H4.
Stabilizer	30% Glycerol
Preservative	0.01% (w/v) Sodium Azide

**Anti-Histone H4 [p Ser1] (RABBIT) Antibody - Additional Information**

Gene ID 121504;554313;8294;8359;8360;8361;8362;8363;8364;8365;8366;8367;8368;8370

**Other Names**  
121504

**Purity**

Anti-Histone H4 [p Ser1] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H4. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and rat. Predicted to react with most mammal species. Cross-reactivity with Histone H4 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 H4 [p Ser1] (RABBIT) Antibody - Protein Information**

**Name** H4C1

**Synonyms** H4/A, H4FA, HIST1H4A

**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**

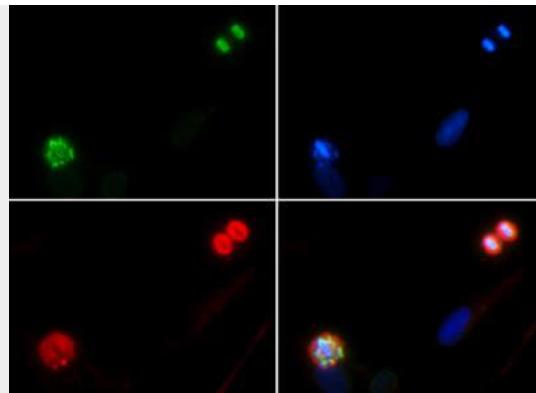
Nucleus {ECO:0000250|UniProtKB:P62806}. Chromosome. Note=Localized to the nucleus when acetylated in step 11 spermatids. {ECO:0000250|UniProtKB:P62806}

**Anti-Histone H4 [p Ser1] (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 H4 [p Ser1] (RABBIT) Antibody - Images**



Immunofluorescence of Rabbit Anti-Histone H4 [p Ser1] Antibody. Tissue: Nonmitotic, prophase, and telophase HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H4 [p Ser1] antibody at a 1:50 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H4 [p Ser1] is nuclear. Staining: Histone H4 [p Ser1] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 594 (red).

#### **Anti-Histone H4 [p Ser1] (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, phosphorylation of H4 Ser1 (H4 pS1) has been linked to mitosis and DNA repair. This modification is enriched in sites proximal to double stranded breaks, but not those associated with UV damage. Casein kinase II (CK2) phosphorylates H4 Ser1, and it also implicated in regulating the DNA damage response. Furthermore, recruitment of CK2 requires the SIN3/RPD3 histone deacetylase complex. Anti-Histone H4 are ideal for researchers interested in DNA Repair, Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, DNA replication Transcription Translation and Splicing, and Epigenetics research.