

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

Histone H4 phospho S1 Antibody Catalog # ASR5655

### **Specification**

Application

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

Host Rabbit

Conjugate
Target Species
Reactivity
Clonality

Unconjugated
Human
Human
Polyclonal

Application Note Anti-Histone H4 [p Ser1] antibody is tested

for Western Blot, Dot Blot, Chromatin

Immunoprecipitation,

WB, IHC, I, LCI

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}

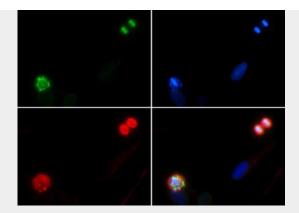
#### Anti-Histone H4 [p Ser1] (RABBIT) Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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 brakes, 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.