

Datasheet for 600-401-I96**Histone H4 phospho S1 Antibody****Overview**

Description:	Anti-Histone H4 [p Ser1] (RABBIT) Antibody - 600-401-I96
Item No.:	600-401-I96
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, Multiplex, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

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.
Synonyms:	rabbit anti-Histone H4 pS1 antibody, H4pS1, HIST2H4B, HIST1H4H, HIST1H4I, HIST1H4J, HIST1H4K, HIST1H4L, HIST2H4, HIST2H4A, HIST1H4A, HIST1H4B, HIST1H4C, HIST1H4D, HIST1H4E, HIST1H4F, histone cluster 4, H4, histone 4, H4
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST4H4
Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
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.
Purity/Specificity:	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.
Relevant Links:	• UniProtKB - P62805 • NCBI - NP_001029249 • GenelD - 121504

Application Details

Tested Applications:	ChIP, Dot Blot, IF, Multiplex, WB
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	2-5µg/million cells
IF:	1:50
IHC:	1:50
WB:	1:1000

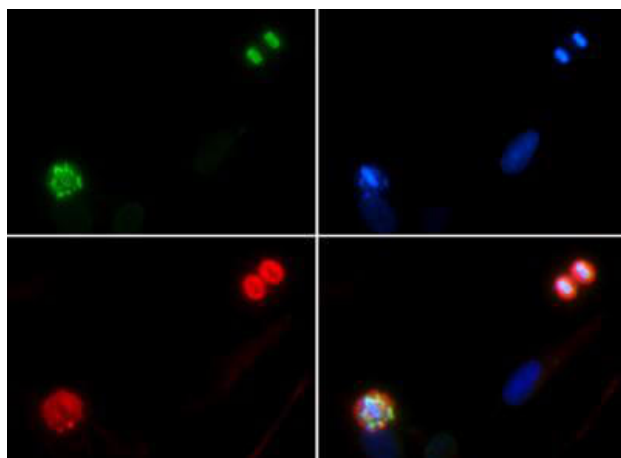
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.89 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	30% Glycerol

Shipping & Handling

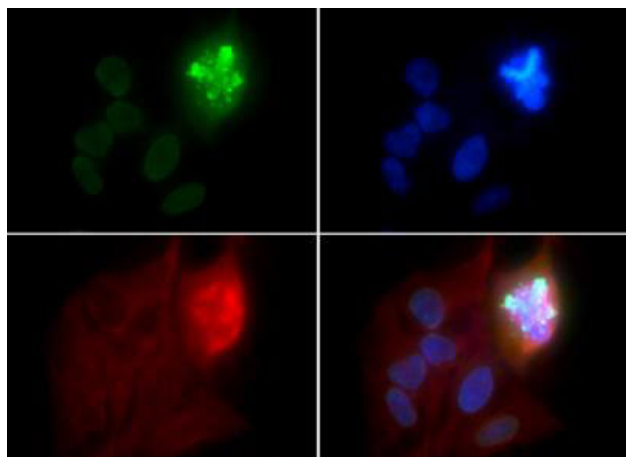
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



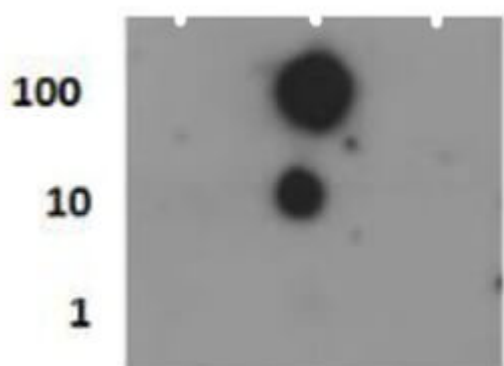
Immunofluorescence Microscopy

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).



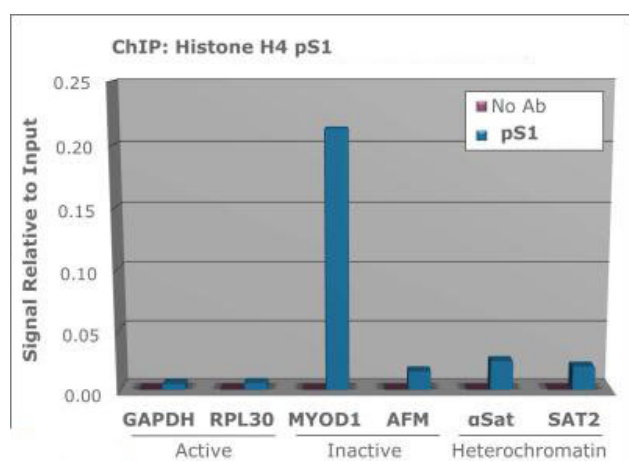
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H4 [p Ser1] Antibody. Tissue: Nonmitotic 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).



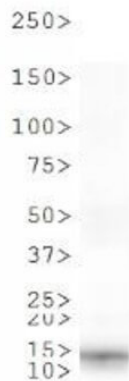
Dot Blot

Dot Blot of Rabbit Histone H4 [p Ser1] Antibody. Lane 1: Histone H4, 1-15. Lane 2: Histone H4 pS1. Lane 3: Histone H4, 1-24. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H4 [p Ser1] antibody at 0.1 µg/ml for 45 min at 4°C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.



ChIP

Chromatin Immunoprecipitation of Rabbit Anti-Histone H4 [p Ser1] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2 µg of Anti-Histone H4 pS1 was used to IP DNA from fixed HeLa cells alongside a no antibody (No Ab) control. DNA was measured by qRT-PCR and normalized to total input (input=1).

**Western Blot**

Western Blot of Rabbit Anti-Histone H4 [p Ser1] Antibody.
Lane 1: HeLa histone prep. Load: 30 µg per lane. Primary antibody: Histone H4 [p Ser1] at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~13 kDa. Other band(s): None.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.