

H4S1p polyclonal antibody - Classic

Cat. No. C15410298

Type: Polyclonal

Source: Rabbit

Lot #: 001

Size: 50 µg

Concentration: 0.89 µg/µl

Specificity: Human, mouse, rat

Purity: Affinity purified

Storage: Store at -20°C; for long storage, store at -80°C.
Avoid multiple freeze-thaw cycles.

Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Applications

	Suggested dilution	Results
ChIP	2-5 µg/million cells	Figure 1
IF	1:50	Figure 2, 3
Western blot	1:1,000	Figure 4
Immunohistochemistry	1:50	
Dot Blot	1:10,000	Figure 5

Target description

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 (H4S1p) 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.

Results

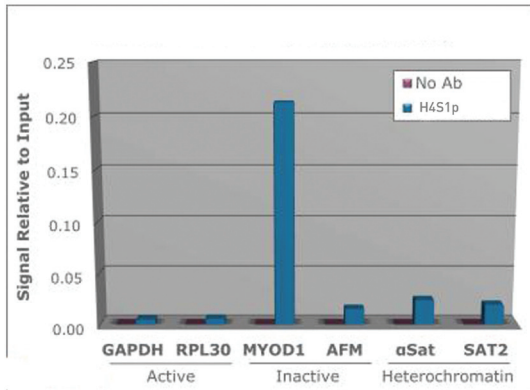


Figure 1. ChIP

Chromatin Immunoprecipitation with the H4S1p antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2 ug of H4S1p alongside a no antibody (No Ab) control. DNA was measured by qPCR and normalized to total input.

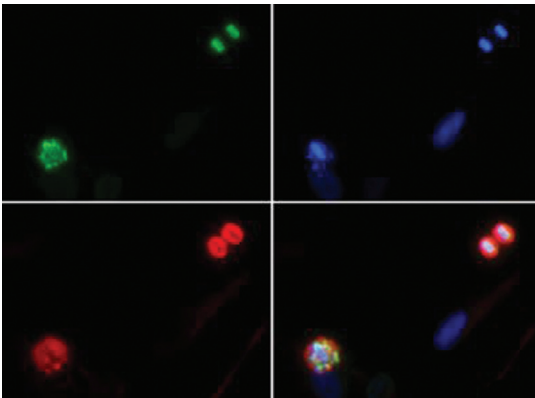


Figure 2. Immunofluorescence

Immunofluorescence with the H4S1p antibody. Tissue: Nonmitotic, prophase, and telophase HeLa cells. Fixation: 0.5% PFA. Primary antibody used 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 H4S1p is nuclear. Staining: Histone H4S1p is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 594 (red).

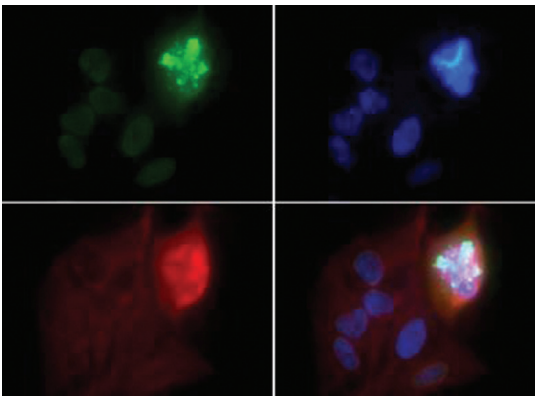


Figure 3. Immunofluorescence

Immunofluorescence with the H4S1p antibody. Tissue: Nonmitotic and telophase HeLa cells. Fixation: 0.5% PFA. Primary antibody used 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 H4S1p is nuclear. Staining: Histone H4S1p is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 594 (red).

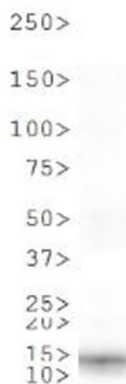


Figure 4. Western Blot

Western Blot with the H4S1p antibody. 30 µg HeLa histone extracts. Primary antibody used at 1:1000 dilution overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at a 1:10,000 for 45 min at RT. Predicted/Observed size: ~13 kDa. Other band(s): None.

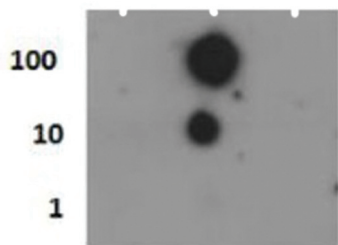


Figure 5. Dot Blot

Dot Blot with the H4S1p antibody. Lane 1: H4S1 unmodified. Lane 2: H4S1p. Lane 3: H4S1 unmodified. Load: 1, 10, and 100 picomoles of peptide. Primary antibody used 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.