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**Product Name: Histone H2A (phospho Thr121) Rabbit Polyclonal Antibody****Catalog #: APRab04774**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Phosphorylated
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application****Dilution Ratio** WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:10000**Molecular Weight****Antigen Information**

<b>Gene Name</b>	HIST1H2AB HIST1H2AG; H2AFP; HIST1H2AI; H2AFC; HIST1H2AK; H2AFD; HIST1H2AL; H2AFI; HIST1H2AM; H2AFN; Histone H2A type 1; H2A.1; Histone H2A/p; HIST1H2AB; H2AFM; HIST1H2AE; H2AFA; Histone H2A type 1-B/E; Histone H2A.2; Histone H2A/a; Histone H2A/m; HIS
<b>Alternative Names</b>	
<b>Gene ID</b>	8329/8332/8336/8969/3012/8335/3013/85235/723790/8337/92815
<b>SwissProt ID</b>	P0C0S8/P04908/P20671/Q96KK5/Q6F113/Q7L7L0
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human Histone H2A around the phosphorylation site of Thr121. AA range:81-130

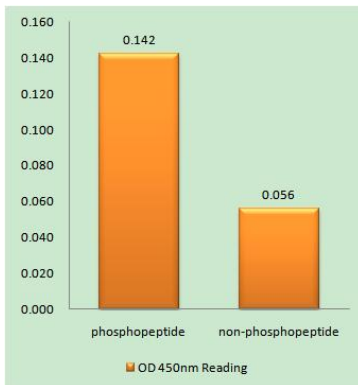
## Background

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. The linker histone, H1, interacts with linker DNA between nucleosomes and functions in the compaction of chromatin into higher order structures. This gene is intronless and encodes a replication-dependent histone that is a member of the histone H2A family. Transcripts from this gene lack polyA tails but instead contain a palindromic termination element. This gene is found in the small histone gene cluster on chromosome 6p22-p21.3. [provided by RefSeq, Aug 2015],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.,mass spectrometry:Monoisotopic with N-acetylserine PubMed:16457589,PTM:Deiminated on Arg-4 in granulocytes upon calcium entry.,PTM:Monoubiquitination of Lys-120 by RING1 and RNF2/RING2 complex gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals. It is involved in the initiation of both imprinted and random X inactivation. Ubiquitinated H2A is enriched in inactive X chromosome chromatin. Ubiquitination of H2A functions downstream of methylation of 'Lys-27' of histone H3. Monoubiquitination of Lys-120 by RNF2/RING2 can also be induced by ultraviolet and may be involved in DNA repair. Following DNA double-strand breaks (DSBs), it is ubiquitinated through 'Lys-63' linkage of ubiquitin moieties by the E2 ligase UBE2N and the E3 ligases RNF8 and RNF168, leading to the recruitment of repair proteins to sites of DNA damage. Monoubiquitination and ionizing radiation-induced 'Lys-63'-linked ubiquitination are distinct events.,PTM:Phosphorylation on Ser-2 is enhanced during mitosis. Phosphorylation on Ser-2 by RPS6KA5/MSK1 directly represses transcription. Acetylation of H3 inhibits Ser-2 phosphorylation by RPS6KA5/MSK1.,PTM:Symmetric dimethylation on Arg-4 by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.,PTM:The chromatin-associated form is phosphorylated on Thr-121 during mitosis.,similarity:Belongs to the histone H2A family.,subunit:The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA.,

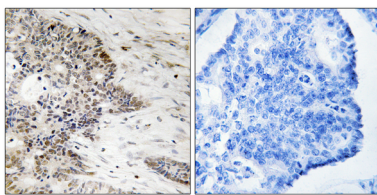
## Research Area

Protein\_Acetylation

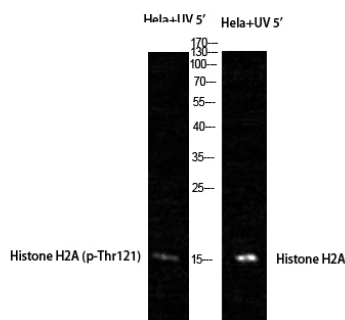
## Image Data



Enzyme-Linked Immunosorbent Assay ( Phospho-ELISA ) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using Histone H2A (Phospho-Thr121) Antibody



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using Histone H2A (Phospho-Thr121) Antibody. The picture on the right is blocked with the phospho peptide.



Western Blot analysis of HeLa+UV 5 ' cells using Phospho-Histone H2A (T121) Polyclonal Antibody.