

# Histone H2A (Phospho Thr121) Rabbit pAb

CatalogNo: YP1071 **Orthogonal Validated** 

## Key Features

### Host Species

- Rabbit

### Reactivity

- Human, Mouse, Rat

### Applications

- WB, IHC, IF, ELISA

### MW

- 14kD (Calculated)

### Isotype

- IgG

## Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

## Recommended Dilution Ratios

**WB 1:500-2000**

**IHC 1:100-1:300**

**ELISA 1:5000**

**IF 1:50-200**

## Basic Information

**Clonality** Polyclonal

## Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human Histone H2A around the phosphorylation site of Thr121. AA range:81-130

## Specificity

Phospho-Histone H2A (T121) Polyclonal Antibody detects endogenous levels of Histone H2A protein only when phosphorylated at T121. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):KKTES

## Target Information

**Gene name** HIST1H2AB

**Protein Name** Histone H2A type 1-B/E

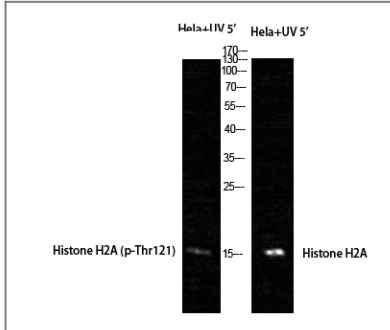
Organism	Gene ID	UniProt ID
Human	<a href="#">8329</a> ; <a href="#">8332</a> ; <a href="#">8336</a> ; <a href="#">8969</a> ; <a href="#">3012</a> ; <a href="#">8335</a> ; <a href="#">3013</a> ; <a href="#">P0C0S8</a> ; <a href="#">P04908</a> ; <a href="#">P20671</a> ; <a href="#">Q96KK5</a> ; <a href="#">85235</a> ; <a href="#">723790</a> ; <a href="#">8337</a> ; <a href="#">92815</a> ;	<a href="#">Q6FI13</a> ; <a href="#">Q7L7L0</a> ;
Mouse	<a href="#">319164</a> ; <a href="#">319168</a> ;	
Rat		<a href="#">P02262</a> ;

**Cellular Localization** Nucleus. Chromosome.

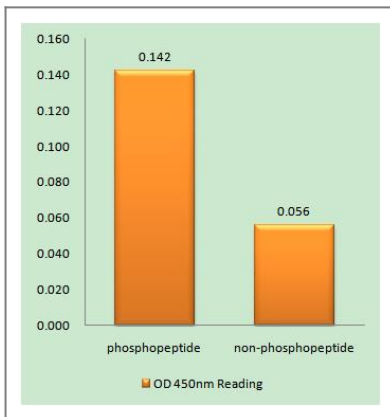
**Tissue specificity** Bone ,Brain ,Colon ,Eye ,Lymph ,PCR rescued clones ,Placenta ,Spleen

**Function** 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. ,

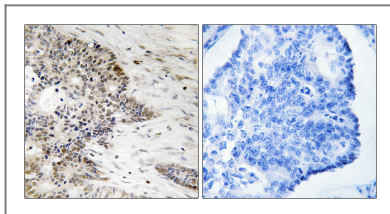
## Validation Data



Western Blot analysis of HeLa+UV 5' cells using Phospho-Histone H2A (T121) Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Inventbiotech, MN, USA).



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.

## Contact information

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Please scan the QR code to access additional product information:  
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