

Product datasheet


Anti-Histone H2A (mono methyl K127) antibody ab12950

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Overview

Product name Anti-Histone H2A (mono methyl K127) antibody

Description Rabbit polyclonal to Histone H2A (mono methyl K127)

 **This product is a [fast track antibody](#). It has been affinity purified and shows high titre values against the immunizing peptide by ELISA.**

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Host species Rabbit

Specificity ELISA data demonstrates that ab12950 specifically recognizes mono-methyl Histone H2A K127. However, mono-methyl histone H2A K127 is a putative modification and is not detectable in HeLa, HeLa nuclear or calf thymus histone extracts using WB analysis. This may be due to low levels of this modification in these cell lines. ab12950 weakly recognizes acetyl histone H2A K127 in HeLa extracts in WB and recognizes recombinant histone H3 at high concentration levels in WB.

Species reactivity **Predicted to work with:** Human 

Immunogen Synthetic peptide conjugated to KLH derived from within residues 100 to the C-terminus of Human Histone H2A. Read Abcam's proprietary immunogen policy (Peptide available as [ab12952](#).)

Properties

Form Liquid

Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer Preservative: 0.02% Sodium Azide
Constituents: 1% BSA, PBS, pH 7.4

Purity Immunogen affinity purified

Clonality Polyclonal

Isotype IgG

Target

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.

Sequence similarities

Belongs to the histone H2A family.

Post-translational modifications

The chromatin-associated form is phosphorylated on Thr-121 during mitosis.

Deiminated on Arg-4 in granulocytes upon calcium entry.

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.

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.

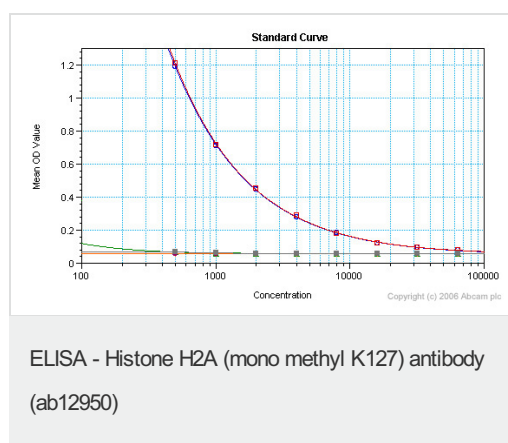
Symmetric dimethylation on Arg-4 by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.

Cellular localization

Nucleus. Chromosome.

Images

This Fast-Track antibody is not yet fully characterised. These images represent **inconclusive preliminary data**.



ELISA eluate (red, blue) and flow through (green) using immunizing peptide ([ab12952](#)). Eluate (orange) and flow through (grey) using un-modified peptide ([ab13202](#)).

This demonstrates that ab12950 specifically recognises mono-methyl K127 compared to the unmodified peptide.

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