

Product datasheet

Recombinant Human Histone H2A (biotinylated) protein ab200286

[1 References](#) [1 Image](#)

Description

Product name	Recombinant Human Histone H2A (biotinylated) protein	
Purity	> 56 % SDS-PAGE.	
Expression system	Escherichia coli	
Accession	Q7L7L0	
Protein length	Full length protein	
Animal free	No	
Nature	Recombinant	
Species	Human	
Sequence	MHHHHHHSGRGKQGGKARAKAKSRSSRAGLQFPVGRVH RLLRKGNYSERV GAGAPV YLAAVLEYLTAEILELAGNAARDNKKTRIIPRHLQLAIRNDE ELNKLLGRVTIAQGGVLPNI QAVLLPKKTESHHKAKGKC	
Predicted molecular weight	15 kDa including tags	
Amino acids	2 to 130	
Modifications	biotinylated	
Tags	His tag N-Terminus	
Additional sequence information	Biotinylated Human Histone 2A without initiator Methionine and with C-terminal Cysteine.	

Specifications

Our [Abpromise guarantee](#) covers the use of **ab200286** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.

pH: 7.40

Constituents: 79% PBS, 0.64% Sodium chloride, 0.02% Potassium chloride, 0.05% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 20% Glycerol (glycerin, glycerine)

General Info

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.

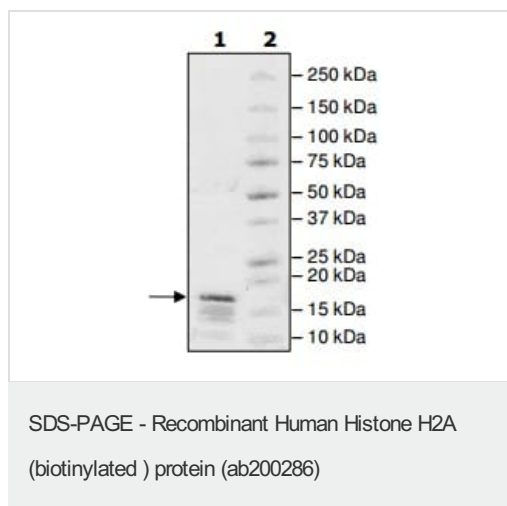
Phosphorylation on Ser-2 is enhanced during mitosis. Phosphorylation on Ser-2 by RPS6KA5/MSK1 directly represses transcription. Acetylation of H3 inhibits Ser-2 phosphorylation by RPS6KA5/MSK1.

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



Lane 1: 4-20% SDS-PAGE Coomassie staining using 2

µg ab200286

Lane 2: Marker

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