

Product datasheet

Recombinant Human Histone H2B protein ab198637

1 Image

Description

Product name	Recombinant Human Histone H2B protein
Purity	> 90 % SDS-PAGE. Affinity purified.
Expression system	Escherichia coli
Accession	<u>Q16778</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MHHHHHHPEPAKSAPAPKKGSKKAVTKAQKKDGKKRKR SRKESYSIVYK VLKQVHPDTGISSKAMGIMNSFVNDIFERIAGEASRLAHYN KRSTITSRE IQTAVRLLLPGELAKHAVSEGTKAVTKYTSSK
Predicted molecular weight	15 kDa including tags
Amino acids	2 to 126
Tags	His tag N-Terminus
Additional sequence information	15 kDa including tags

Specifications

Our **Abpromise guarantee** covers the use of **ab198637** 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. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.79% Tris HCl, 0.87% Sodium chloride, 10% Glycerol (glycerin, glycerine), 0.017% PMSF, 0.015% (R*,R*)-1,4-Dimercaptobutan-2,3-diol
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General Info

Relevance

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. Subunit structure 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. Post-translational modification Monoubiquitination at Lys-35 (H2BK34Ub) by the MSL1/MSL2 dimer is required for histone H3 'Lys-4' (H3K4me) and 'Lys-79' (H3K79me) methylation and transcription activation at specific gene loci, such as HOXA9 and MEIS1 loci. Similarly, monoubiquitination at Lys-121 (H2BK120Ub) by the RNF20/40 complex gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation. It also functions cooperatively with the FACT dimer to stimulate elongation by RNA polymerase II. H2BK120Ub also acts as a regulator of mRNA splicing: deubiquitination by USP49 is required for efficient cotranscriptional splicing of a large set of exons. Phosphorylation at Ser-37 (H2BS36ph) by AMPK in response to stress promotes transcription. Phosphorylated on Ser-15 (H2BS14ph) by STK4/MST1 during apoptosis; which facilitates apoptotic chromatin condensation. Also phosphorylated on Ser-15 in response to DNA double strand breaks (DSBs), and in correlation with somatic hypermutation and immunoglobulin class-switch recombination. GlcNAcylation at Ser-113 promotes monoubiquitination of Lys-121. It fluctuates in response to extracellular glucose, and associates with transcribed genes. Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes.

Cellular localization

Nuclear

Images



4-20% SDS-PAGE with Coomassie staining

Lane 1: ab198637

Lane 2: Protein marker

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Response to your inquiry within 24 hours

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