abcam

Product datasheet

Recombinant Human Histone H4 protein (Tagged) ab198051

1 Image

Description

Product name	Recombinant Human Histone H4 protein (Tagged)
Purity	> 93 % SDS-PAGE.
Expression system	Escherichia coli
Accession	P62805
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	SGRGKGGKGLGKGGAKRHRKVLRDNIQGITKPAIRRLARR GGVKRISGLI YEETRGV
Predicted molecular weight	32 kDa including tags
Amino acids	2 to 58
Tags	GST tag N-Terminus
Additional sequence information	GenBank Accession No. NM_003548

Specifications

Our **Abpromise guarantee** covers the use of **ab198051** 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

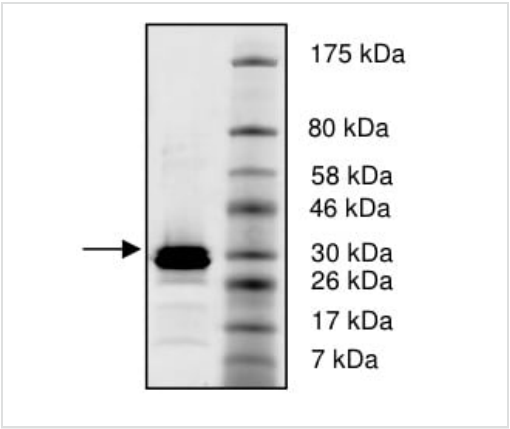
Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.63% Tris HCl, 0.64% Sodium chloride, 20% Glycerol (glycerin, glycerine), 0.05% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.02% Potassium chloride, 0.49% Glutathione

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 H4 family.
Post-translational modifications	Acetylation at Lys-6 (H4K5ac), Lys-9 (H4K8ac), Lys-13 (H4K12ac) and Lys-17 (H4K16ac) occurs in coding regions of the genome but not in heterochromatin. Citrullination at Arg-4 (H4R3ci) by PADI4 impairs methylation. Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac). Demethylation is performed by JMJD6. Symmetric dimethylation on Arg-4 (H4R3me2s) by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage. Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3). Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing. Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage. The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me). Sumoylated, which is associated with transcriptional repression.
Cellular localization	Nucleus. Chromosome.

Images



SDS-PAGE - Recombinant Human Histone H4 protein (Tagged) (ab198051)

4-20% SDS-PAGE of Histone H4 protein fragment using 2.4µg of ab198051.

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