

# Human / Mouse Histone H3.1 / HIST1H3A / H3FA Protein



Sino Biological  
Biological Solution Specialist

Catalog Number: 11231-HNAE

## General Information

### Gene Name Synonym:

H3/A; H3FA; HIST1H3A; HIST1H3B; HIST1H3C; HIST1H3D; HIST1H3E; HIST1H3F; HIST1H3G; HIST1H3H; HIST1H3I; HIST1H3J

### Protein Construction:

A DNA sequence encoding the native human HIST1H3A (NP\_003520.1) (Met1-Ala136) was expressed. Human and Mouse HIST1H3A sequences are identical.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human HIST1H3A consisting of 136 amino acids and has a predicted molecular mass of 15.5 kDa as estimated in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 2mM β-Mercaptoethanol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

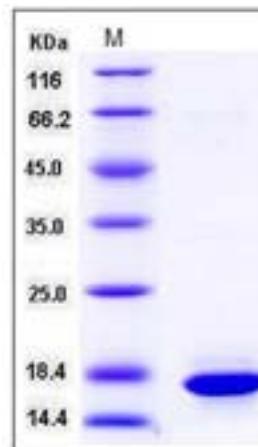
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

### SDS-PAGE:



## Protein Description

Histone H3.1, also known as HIST1H3A, HIST1H3B, HIST1H3C, HIST1H3D, HIST1H3E, HIST1H3F, HIST1H3G, HIST1H3H, HIST1H3I, HIST1H3J, is a member of the histone H3 family which is a core component of nucleosome. It is expressed during S phase, then expression strongly decreases as cell division slows down during the process of differentiation. 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. Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. This structure consists of approximately 146 bp of DNA wrapped around an octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures.

### References

1. Lachner M, et al., 2001, Nature 410 (6824): 116-20.
2. Koessler H, et al., 2003, DNA Cell Biol. 22 (4): 233-41.
3. Macdonald N, et al., 2005, Mol. Cell 20: 199-211.

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