



# Recombinant Protein Technical Manual

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

RPES2514

### Product Data:

**Product SKU:** RPES2514

**Size:** 20µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** NP\_003520.1

### Protein Information:

**Molecular Mass:** 15.5 kDa

**AP Molecular Mass:** 15.5 kDa

**Tag:**

**Bio-activity:**

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

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 2mM β-Mercaptoethanol

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

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



## Immunogen Information:

**Sequence:** Met 1-Ala 136

## Background:

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.