Histone H2A Human, Recombinant

M2502S

100 µg 1.0 mg/ml Lot: 0151512
RECOMBINANT Store at –20°C Exp: 12/17

Description: Histone H2A combines with Histone H2B to form the H2A-H2B heterodimer. Two H2A/H2B heterodimers interact with an H3/H4 tetramer to form the histone octamer (1,2). Histone H2A is also modified by various enzymes and can act as a substrate for them. These modifications have been shown to be important in gene regulation.

Source: An E. coli strain that carries a plasmid encoding the cloned human Histone H2A gene, HIST3H2A. (Genbank accession number: AY131974)

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Supplied in: 20 mM Sodium Phosphate (pH 7.0), 300 mM NaCl and 1 mM EDTA.

Note: The protein concentration (1 mg/ml or 71 µM) is calculated using the molar extinction coefficient for Histone H2A (3840) and its absorbance at 280 nm (3.4). 1.0 A280 units = 3.6 mg/ml

SDS-PAGE analysis of Histone H2A Human, Recombinant.

ESI-TOF Analysis of Histone H2A Human, Recombinant.

SDS-PAGE: 0.5, 1.0, 2.0, 5.0, 10.0 µg of Histone H2A Human, Recombinant were loaded on a 10–20% Tris-Glycine SDS-PAGE gel and stained with Coomassie Blue. The calculated molecular weight is 13990.24 Da. Its apparent molecular weight on 10–20% Tris-Glycine SDS-PAGE gel is ~15 kDa.

Quality Control Assays:

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Mass Spectrometry: The mass of purified Histone H2A Human, Recombinant is 13,990.72 Da as determined by ESI-TOF MS (Electrospray Ionization-Time of Flight Mass Spectrometry). The average mass calculated from primary sequence is 13,990.24 Da. This confirms the protein identity of the histone.

Protease Assay: After incubation of 5 µg of Histone H2A Human, Recombinant with a standard mixture of proteins for 4 hours at 37°C, no proteolytic activity could be detected by SDS-PAGE.

Exonuclease Assay: Incubation of a 50 µl reaction containing 10 µg of Histone H2A Human, Recombinant with 1 µg of a mixture of single and double-stranded [3H] E. coli DNA (200,000 cpm/µg) for 4 hours at 37°C resulted in < 5.0% conversion to RF II form (nicked circle) as determined by agarose gel electrophoresis.

(see other side)
Protein Sequence: SGRGKQGGKARAKAKSRSSR
AGLQFPVGRVHLLRKGNYSERVGAGAPVYLAAV
LEYLTAEILELAGNADNKKTRIIHRHLQALAIRND
EELNKLGRVTIAQGVLPIQAVLLPKKTESHKA
KGK (Genbank accession number: AAN59960)

References:

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References: