

Recombinant Histone H2B (Xenopus)

Catalog No: 31252, 31705

Expressed In: *E. coli*

Quantity: 50, 1000 µg

Source: Xenopus

Buffer Contents: Recombinant Histone H2B (Xenopus) is supplied as lyophilized powder. Recombinant histones can be resuspended in water or any suitable buffer. We recommend a starting concentration of 1 mg/ml. To fully solubilize the histone we suggest resuspension in the buffer of choice at room temperature for 20-30 minutes with occasional pipetting. Addition of salt or Tris to the resuspension buffer may enhance histone solubility.

Background: Histone H2B is one of the core components of the nucleosome. The nucleosome is the smallest subunit of chromatin and consists of 146 base pairs of DNA wrapped around an octamer of core histone proteins (two each of H2A, H2B, H3 and H4). Histone H1 is a linker histone, present at the interface between the nucleosome core and DNA entry/exit points.

Protein Details: Recombinant Histone H2B (Xenopus) is produced in *E. coli* and purified using FPLC. Protein concentration was determined using the molar extinction coefficient for Histone H2B and absorbance at 280nm. The recombinant histone is >98% pure by SDS-PAGE. The molecular weight of the protein is 13,494 Daltons. The H2B protein is missing the first three residues (PEP).

The protein sequence is as follows: AKSAPA PPKGSKKAVT KTQKKDGKKR
RKSARKESYAI YVYKVLKQVH PDTGISSKAM SIMNSFVNDV FERIAGEASR
LAHYNKRSTI TSREIQTAVR LLLPGELAKH AVSEGTKAVT KYTSAK

Application Notes: Recombinant histones are suitable for use as positive controls in the analysis of histone post-translational modifications, as substrates for histone modification enzymes, or to generate chromatin *in vitro*.

References:

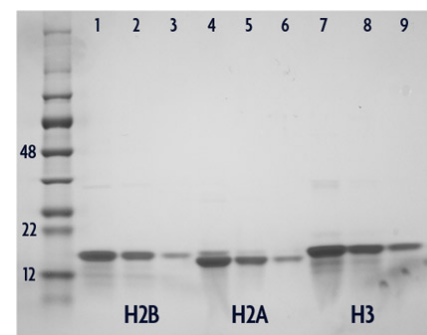
This product was used in the following publications:

Li, J., *et. al.* (2016). "Nuclear PKC-theta facilitates rapid transcriptional responses in human memory CD4+ T cells through p65 and H2B phosphorylation." *J. Cell Sci.* 129 (12):2448-61. PMID: 27149922.

(*in vitro* kinase assay)

Storage and Guarantee: Lyophilized proteins can be stored at -20°C or -80°C, preferably desiccated. Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



Recombinant Histone H2B (Xenopus) analyzed by SDS-PAGE gel.

5 µg, 2 µg and 1 µg respectively of Recombinant Histone H2B, Catalog No. 31252 (lanes 1-3), Recombinant Histone H2A, Catalog No. 31251 (lanes 4-6) and Recombinant Histone H3, Catalog No. 31207 (lanes 7-9).