

# Human Recombinant Human Mononucleosomes (H2AZ.1), Biotinylated

**Cat. No.** NUC-040    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Mononucleosomes assembled from recombinant human histones expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | Mononucleosomes assembled from recombinant human histones expressed in E. coli (two each of histones H2AZ.1, H2B, H3 and H4. Accession numbers: H2AZ.1-P0C0S5; H2B-O60814; H3.1-P68431; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA with a 5' biotin-TEG group. The nucleosome is the basic subunit of chromatin. H2AZ.1 and H2AZ.2 are variants of histone H2A and implicated in diverse cellular functions ranging from transcriptional regulation, chromosome transmission and DNA damage repair. H2AZ has a dedicated deposition machinery (the SWR-C ATPase). |
| <b>Form</b>             | Purified recombinant mononucleosomes (50 $\mu$ g total mass, 27.4 $\mu$ g in 50.0 $\mu$ l) in 10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, & 20% glycerol. Concentration of nucleosomes is 5.02 $\mu$ M.                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Molecular Mass</b>   | 199,124.5 Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>     | Mononucleosomes (H2AZ.1), Human Recombinant Biotinylated are highly purified and are suitable for use as substrates in enzyme screening assays or for nucleosome                                                                                                                                                                                                                                                                                                                                                                                                                            |

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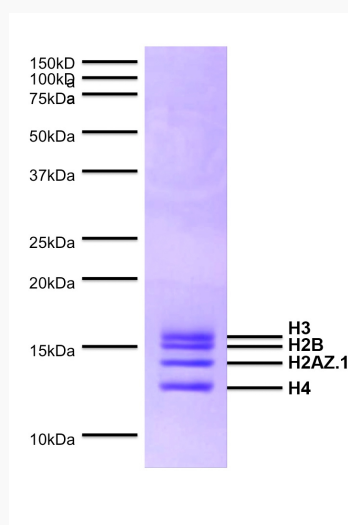
binding experiments. The absence of post-translational histone modifications makes them ideal for conducting enzyme activity and screening assays.

**Storage**

Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.

**Conjugation**

Biotin

**Protein Gel Data**


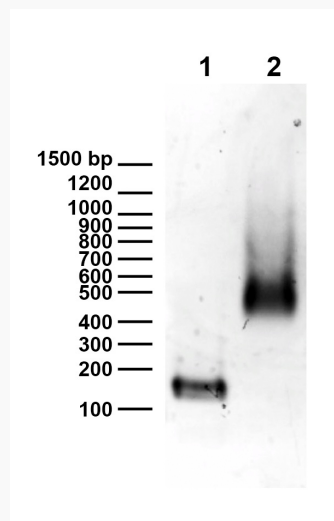
Coomassie stained PAGE gel of proteins in Nucleosome (H2AZ.1), Human Recombinant Biotinylated (1 g) demonstrates the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2AZ.1, H2B, H3 and H4) are indicated.

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### DNA Gel Data



Nucleosome (H2AZ.1), Human Recombinant Biotinylated run on an agarose gel and stained with ethidium bromide to visualize DNA. Lane 1: DNA extracted from nucleosomes (100 ng). Lane 2: Intact nucleosomes (400 ng). Note absence of free DNA in Lane 1, indicating all DNA complexed with histones.

### Western Blot Data

Western Analysis of Nucleosome (H2AZ.1), Human Recombinant Biotinylated. Top Panel: Wild type (Lane 1) and H2AZ.1-containing nucleosomes (Lane 2) were probed with an anti-H2AZ antibody and analyzed via ECL readout. Only the H2AZ.1 samples produced a detectable signal. Bottom Panel: Detail from Coomassie stained gel showing histones from H2A (Lane 1) and H2AZ.1 nucleosomes (Lane 2).

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