

# Recombinant Human Mononucleosome (H3.1ΔN2), Biotinylated

**Cat. No.** NUC-007    **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 H2A, H2B, H3.1ΔN2 and H4; accession numbers: H2A-P04908; H2BO60814; H3.1-P68431; H4-P62805) with the amino acid sequence of H3 beginning with threonine 3, wrapped by 147 base pairs of 601 positioning sequence DNA. The 601 sequence, identified by Lowary and Widom, is a 147-base pair sequence that has high affinity for histone octamers and is useful for nucleosome assembly and contains a 5' biotin-TEG group. |
| <b>Form</b>             | Mononucleosome (H3.1ΔN2), Recombinant Human, Biotinylated (27.3 µg protein weight, 50 µg DNA+protein) in µl 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol.                                                                                                                                                                                                                                                                                                                                             |
| <b>Molecular Mass</b>   | 199,405.26 Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Applications</b>     | Mononucleosome (H3.1ΔN2), Recombinant Human, Biotinylated are highly purified and are suitable for use as substrates in enzyme screening assays, structural studies,                                                                                                                                                                                                                                                                                                                                                           |

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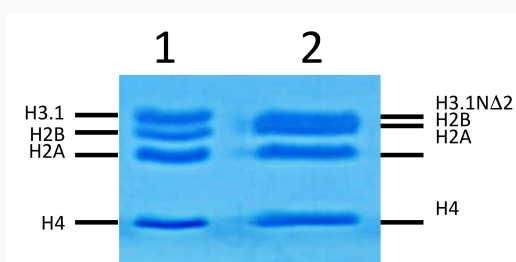
or for effector protein binding experiments. The N-terminal deletion allows for the study of the role of the N-terminus in many aspects of chromatin biology.

**Storage**

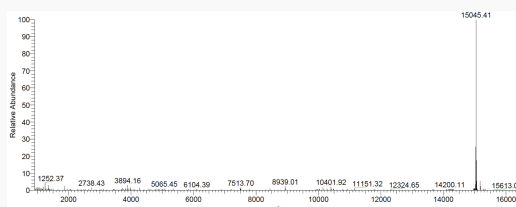
Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.

**Conjugation**

Biotin

**Detailed Protein Gel**
**Data of NUC-007**


Coomassie stained PAGE gel of proteins in WT Mononucleosomes (Lane 1) resolved alongside proteins in Mononucleosome (H3.1ΔN2), Human Recombinant Biotinylated (Lane 2). The faster migration of the H3.1ΔN2 observed in Lane 2 as compared to Lane 1 denotes the deletion of the amino acids from the N-terminus of the histone protein.

**Mass Spec Data of**
**NUC-007**


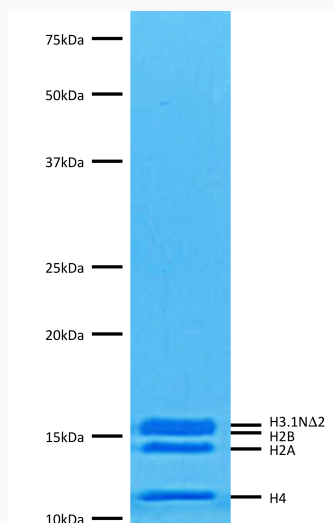
H3.1ΔN2 protein analyzed by high resolution mass spectrometry. Expected mass = 15,045.6 Da. Determined mass = 15,045.5 Da.

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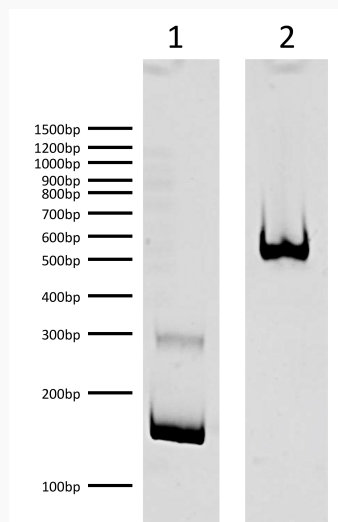
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### Protein Gel Data of NUC-007



Coomassie stained PAGE gel of proteins in Mononucleosome (H3.1ΔN2), Recombinant Human, Biotinylated (1 μg) to demonstrate the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3.1ΔN2, and H4) are indicated.

### DNA Gel Data of NUC-007



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Mononucleosome (H3.1ΔN2), Recombinant Human, Biotinylated run on a native PAGE gel and stained with ethidium bromide to visualize DNA. Lane 1: Free DNA (100 ng). Lane 2: Intact nucleosomes (300 ng).

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