

Mononucleosomes (H3.1ΔN2), Recombinant Human, Biotinylated

Catalog No. 16-0023
Lot No. 17278001
Pack Size 50 μg



EpiCypher®

Product Description:

Mononucleosomes assembled from recombinant human histones expressed in *E. coli* (two each of histones H2A, H2B, H3.1ΔN2, and H4 Accession numbers: H2A-P04908; H2B-O60814; 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 nucleosome is the basic subunit of chromatin. 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.

Formulation:

Purified recombinant mononucleosomes (50 μg total mass, 27.3 μg protein + 23.7 μg DNA in 37.9 μl) in 10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, & 20% glycerol. Concentration of nucleosomes is 6.61 μM. Nucleosome molecular weight = 199,405.26 Da.

Storage and Stability:

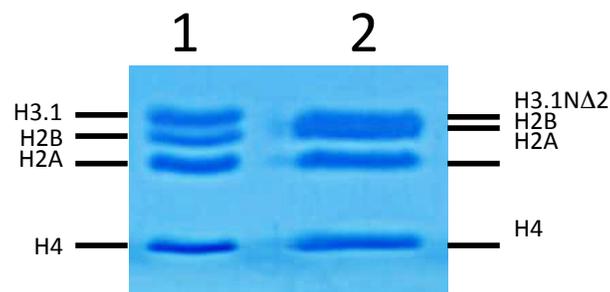
Stable for six (6) months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.

Application Notes:

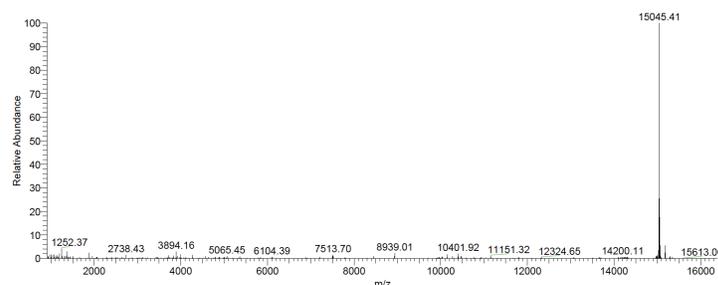
Mononucleosomes (H3.1ΔN2), Human Recombinant Biotinylated are highly purified and suitable for use as substrates in enzyme screening assays, structural studies, or effector protein binding experiments. The N-terminal deletion allows for the study of the role of the N-terminus in many aspects of chromatin biology.

References:

Lowary PT and J Widom (1998). *J Mol Biol* 276: 19-42.
Luger K et al (1999). *Methods Mol Biol* 119: 1-16.

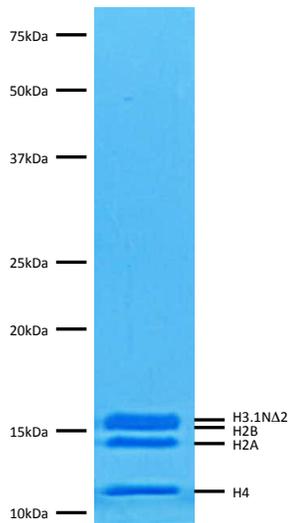


Detailed Protein Gel Data: Coomassie stained PAGE gel of proteins in WT Mononucleosomes (Lane 1) resolved alongside proteins in Mononucleosome (H3.1ΔN2), Human Recombinant Biotinylated (Lane 2). The faster migration of the H3.1ΔN2 observed in Lane 2 as compared to Lane 1 denotes the deletion of the amino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

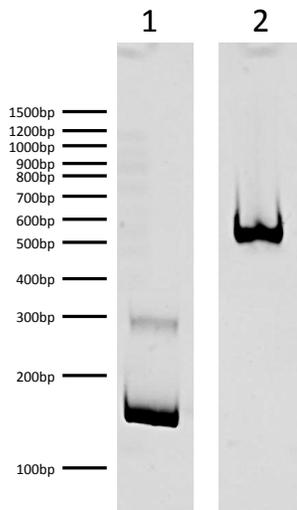


Mass Spec Data: H3.1ΔN2 protein analyzed by nanospray-orbitrap high resolution mass spectrometry. Expected mass = 15045.6 Da. Determined mass = 15045.4 Da.

This product is for *in vitro* research use only and is not intended for use in humans or animals.



Protein Gel Data: Coomassie stained SDS-PAGE of proteins in Mononucleosomes (H3.1ΔN2), Human Recombinant Biotinylated (1 μg) demonstrates 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: Mononucleosome (H3.1ΔN2), Human Recombinant 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).

This product is for *in vitro* research use only and is not intended for use in humans or animals.