H3.1ΔN32 Recombinant Nucleosome with Linker DNA, Biotinylated

Catalog No	16-2016	**Species**	Human
Lot No	23346001-04	**Source**	*E. coli* & synthetic DNA
Pack Size	50 µg	**Tag**	Biotinylated
Concentration	4.0 µM	**MW**	225,242 Da

DESCRIPTION

Recombinant mononucleosomes consist of 199 base pairs of DNA wrapped around an octamer core of histone proteins (two each of H2A, H2B, H3.1, and H4) to form a nucleosome, the basic repeating unit of chromatin. The 5' biotin-TEG DNA consists of a core 147 bp 601 nucleosome assembly sequence [1] flanked by 26 bp linker sequences as underlined below. The amino acid sequence of H3.1 begins with glycine 33 (amino acids 1-32 are deleted).

TECHNICAL INFORMATION

Storage	Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid freeze/thaws.
Formulation	0.90 mg/mL mononucleosome in 55.5 µL 10 mM Tris-HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. (22.6 µg protein, 50 µg DNA + protein).

APPLICATION NOTES

H3.1ΔN32 Recombinant Nucleosome with Linker DNA is highly purified and suitable for a variety of applications, including use as a substrate in enzyme assays, high-throughput screening and inhibitor testing, chromatin binding studies, protein-protein interaction assays, structural studies, and in effector protein binding experiments. The N-terminal deletion enables study of its role in chromatin biology.

DNA SEQUENCE

5'-Bio-TEG
GGACCCTATACGCGGCCGCCGAATTCCTGGAGAATCCCGGTCTGCAGGCCGCTCAATTGGTCGTAGACAGCTCTAGCACCG
CTTAAACGCACGTACGCGCTGTCCCCCGCGTTTTAACCGCCAAGGGGATTACTCCCTAGTCTCCAGGCACGTGTCAGATATA
TACATCCTGTGGATCCGCCGGTCGCGAACAGCGACC3'

GENE & PROTEIN INFORMATION

UniProt ID	H2A - P04908 (alt. names: H2A type 1-B/E, H2A.2, H2A/a, H2A/m) H2B - O60814 (alt. names: H2B K, HIRA-interacting protein 1) H3.1 - P68431 (alt. names: H3, H3/a, H3/b, H3/c, H3/d) H4 - P62805

REFERENCES

[1] Lowary & Widom *J. Mol. Biol.* (1998). PMID: 9514715

VALIDATION DATA

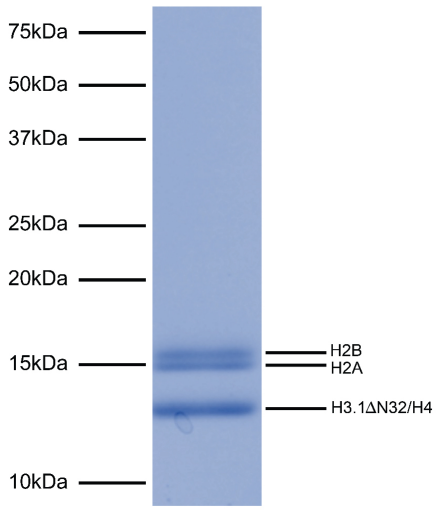

FIGURE 1 Protein gel data. Coomassie stained SDS-PAGE gel of proteins in H3.1ΔN32 Nucleosome (1 µg) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3.1ΔN32 and H4) are indicated. H3.1ΔN32 and H4 co-migrate based on their molecular weights.

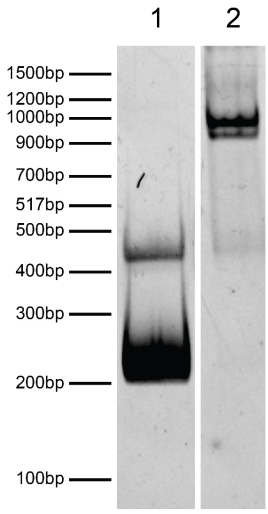

FIGURE 2 DNA gel data. H3.1ΔN32 Nucleosomes resolved by native PAGE and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-2044; 100 ng). Biotinylated DNA can dimerize (band at ~400 bp). **Lane 2:** Intact nucleosomes (400 ng).