Mononucleosomes, Recombinant, 199x601 DNA, Biotinylated

Catalog No	16-2044	**Species**	Human
Lot No	22343003-01	**Source**	*E. coli* & synthetic DNA
Pack Size	50 µg	**Tag**	Biotinylated
Concentration	5.2 µM	**MW**	231,881.5 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 601 sequence, identified by Lowary and Widom [1], is a 147-base pair sequence that has high affinity for histone octamers and is useful for nucleosome assembly. The 601 sequence is flanked by a 26 bp sequence as underlined in the DNA sequence below. The DNA in this nucleosome contains a 5' biotin-TEG group.

TECHNICAL INFORMATION

Storage	Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid freeze/thaws
Formulation	1.2 mg/mL mononucleosome in 41.5 µL 10 mM Tris pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. (23.4 µg protein, 50 µg DNA + protein)

APPLICATION NOTES

Mononucleosomes, Recombinant, 199x601 DNA, Biotinylated are 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.

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

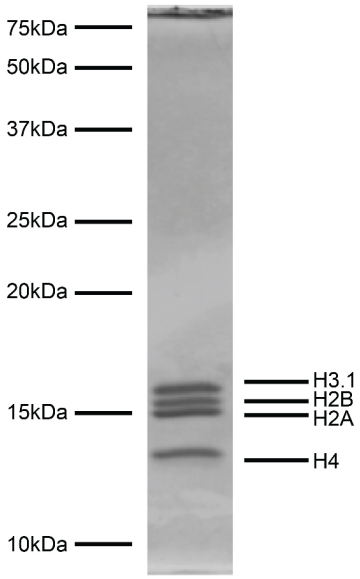

FIGURE 1 Protein gel data. Coomassie stained SDS-PAGE gel of proteins in Mononucleosomes, Recombinant, 199x601 DNA, Biotinylated (1 µg) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3.1, and H4) are indicated.

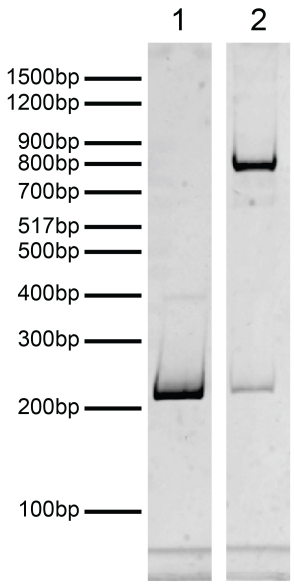

FIGURE 2 DNA gel data. Mononucleosomes, Recombinant, 199x601 DNA, Biotinylated resolved via native PAGE gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-2044; 100 ng) **Lane 2:** Intact nucleosomes (400 ng).