

Mononucleosomes, Recombinant, Symmetrically Methylated 199x601 DNA, Biotinylated

Catalog No	16-2045	Species	Human
Lot No	23131002-01	Source	<i>E. coli</i> & synthetic DNA
Pack Size	50 µg	Tag	Biotinylated
Concentration	6.0 µM	MW	232,993.9 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 symmetrically methylated (bolded/blue) 26 bp sequence (underlined) as shown in the DNA sequence below. The DNA in this nucleosome contains a 5' biotin-TEG group.

TECHNICAL INFORMATION

Storage	Stable for six months at -20°C from date of receipt. For best results, aliquot and avoid freeze/thaws
Formulation	1.4 mg/mL mononucleosome in 35.8 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
CTTAAACGCACGTACGCGCTGTCCCCGCGTTTTAACCGCCAAGGGGATTACTCCCTAGTCTCCAGGCACGTGTCAGATATA
TACATCCTGTGGATCCGCGCGGTGCGGAACAGCGACC3'

3'CCTGGGATATGCGCCGGCGGGCTTAAGGACCTCTTAGGGCCAGACGTCCGGCGAGTTAACCCAGCATCTGTGAGATCGTGG
CGAATTTGCGTGCATGCGCGACAGGGGGCGCAAATTGGCGGTTCCCCTAATGAGGGATCAGAGGTCCGTGCACAGTCTAT
ATATGTAGGACACCTAGGCGGCCAGCGCTTGTCGCTGG5'

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
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REFERENCES

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

VALIDATION DATA

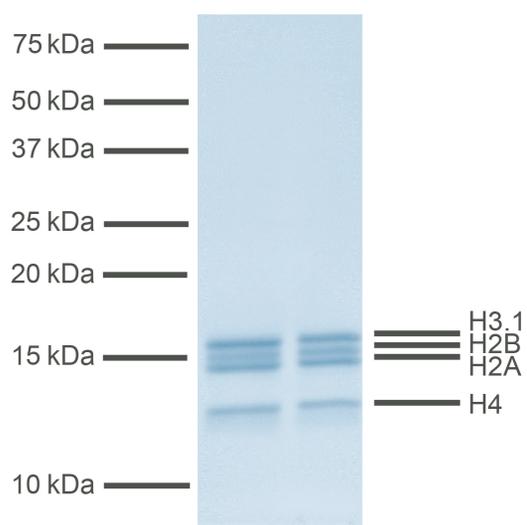


FIGURE 1 Protein gel data. Coomassie stained SDS-PAGE of proteins in Mononucleosomes, Recombinant, Symmetrically Methylated 199x601 DNA, Biotinylated (1 μ g) demonstrates the purity of histones in the preparation. Molecular weight markers and positions of the core histones (H2A, H2B, H3.1 and H4) are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

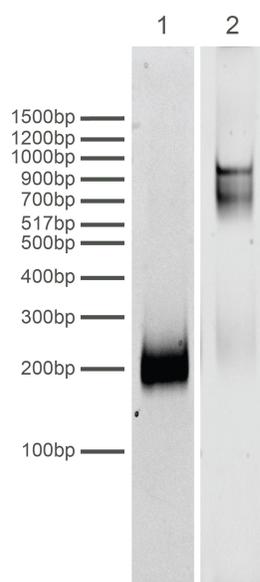


FIGURE 2 DNA gel data. Mononucleosomes, Recombinant, Symmetrically Methylated 199x601 DNA, Biotinylated resolved via native PAGE gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (100 ng). **Lane 2:** Intact nucleosomes (400 ng).