

H4K12me1 Recombinant Nucleosome, Biotinylated

Catalog No	16-0393	Species	Human
Lot No	25125002-01	Source	<i>E. coli</i> & synthetic DNA
Pack Size	50 µg	Tag	Biotinylated
Concentration	4.9 µM	MW	199,854 Da

DESCRIPTION

H4K12me1 (histone H4 lysine 12 monomethylation) Recombinant Nucleosome, Biotinylated consists of 147 base pairs of DNA wrapped around an octamer of core histone proteins (two each of H2A, H2B, H3.1, and H4) to form a nucleosome, the basic repeating unit of chromatin. The 147 bp 601 sequence, identified by Lowary and Widom [1], has high affinity for histone octamers and is useful for nucleosome assembly. H4K12me1 nucleosome contains monomethylated lysine at position 12. The DNA 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	0.97 mg/mL mononucleosome in 51.5 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol (27.2 µg protein, 50 µg DNA + protein).

APPLICATION NOTES

H4K12me1 nucleosome 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. For a corresponding unmodified control, we recommend EpiCypher 16-0006.

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 H4 - P62805
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REFERENCES

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

VALIDATION DATA

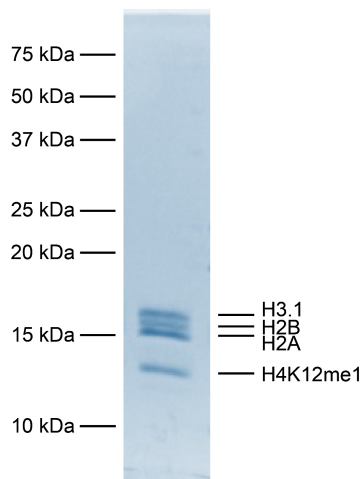


FIGURE 1 Protein gel data. Coomassie stained SDS-PAGE gel of proteins in H4K12me1 nucleosome (1 μ g) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3, and H4K12me1) are indicated.

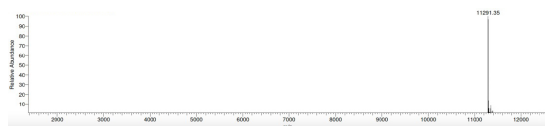


FIGURE 2 Mass spec data. Synthetic H4K12me1 histone analyzed by high resolution mass spectrometry. Expected mass = 11,292.2 Da. Determined mass = 11,291.35 Da.

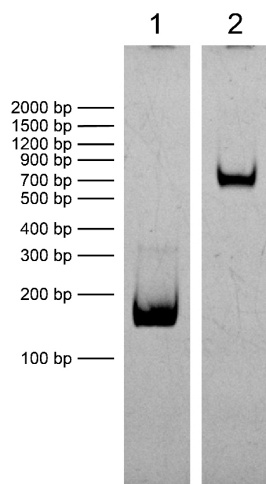


FIGURE 3 DNA gel data. H4K12me1 nucleosome resolved via native PAGE and stained with ethidium bromide to visualize DNA. Both lanes are from the same gel. **Lane 1:** Free DNA (EpiCypher 18-0005; 100 ng). **Lane 2:** Intact H4K12me1 nucleosomes (400 ng).