Nucleosome, Recombinant Human, H3K4,K27me3 dNuc, Biotinylated

Catalog No 16-0403
Lot No 22122001-05
Pack Size 50 µg

Product Description:

Mononucleosomes assembled from recombinant human histones expressed in *E. coli* (two each of histones H2A, H2B, H3 and H4; accession numbers: H2A-P20671; H2B-O60814; H3.2-Q71DI3; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA. Histone H3 (created by a proprietary semi-synthetic method) contains trimethylated-lysines at positions 4 and 27. The nucleosome is the basic subunit 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. The DNA contains a 5' biotin-TEG group.

* H3K4,K27me3 has a Cys to Ala substitution at position 110.

Formulation:

H3K4,K27me3 dNuc (27.2 µg protein weight, 50 µg DNA + protein) in 50.0 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 5.0 µM. MW = 199,935.2 Da.

Storage and Stability:

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

Application Notes:

H3K4,K27me3 dNuc is highly purified and suitable for a variety of applications, including use as a substrate in enzymatic assays or for effector protein binding experiments.

References:

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

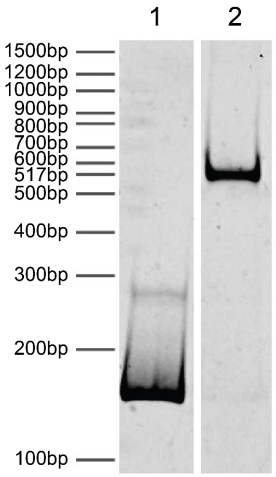

Figure 1: DNA gel data. H3K4,K27me3 dNuc resolved via native PAGE and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-0005; 100 ng). **Lane 2:** Intact H3K4,K27me3 nucleosomes (400 ng).

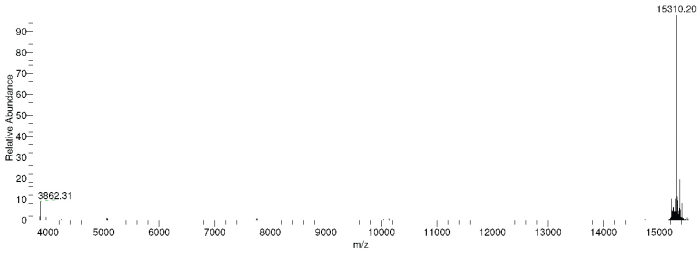

Figure 2: Mass spec data. Semi-synthetic H3K4,K27me3 histone analyzed by high resolution mass spectrometry. Expected mass = 15,308.8 Da. Determined mass = 15,310.20 Da.

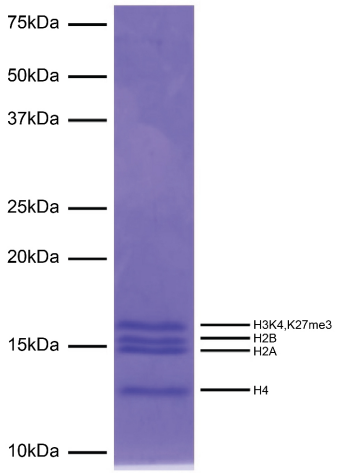

Figure 3: Protein gel data. Coomassie stained PAGE gel of proteins in H3K4,K27me3 dNuc (1 µg) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3K4,K27me3, and H4) are indicated.