Nucleosome, Recombinant Human, H4K20me1 dNuc, Biotinylated

Catalog No 16-0331
Lot No 21056002-05
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-P04908; H2B-O60814; H3.1-P68431; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA. Histone H4 (created by a proprietary synthetic method) contains monomethyl-lysine at position 20. 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.

Formulation:

H4K20me1 dNuc (27 µg protein weight, 50 µg DNA + protein) in 51 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 4.9 µM. MW = 199,887.86 Da.

Storage and Stability:

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

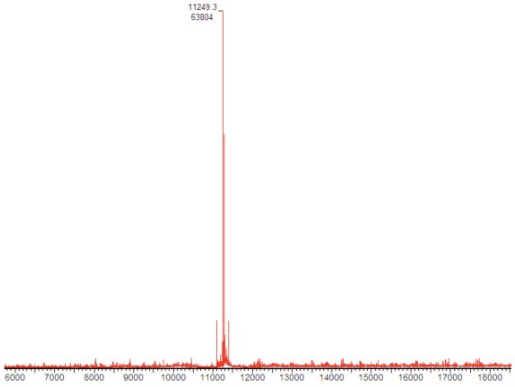
Application Notes:

H4K20me1 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.

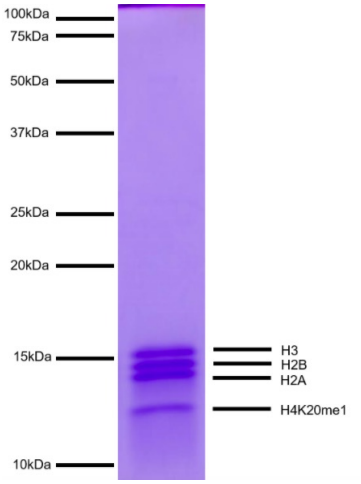
References:

[1] Lowary PT and Widom J (1998) *J Mol Biol* 276:19-42.

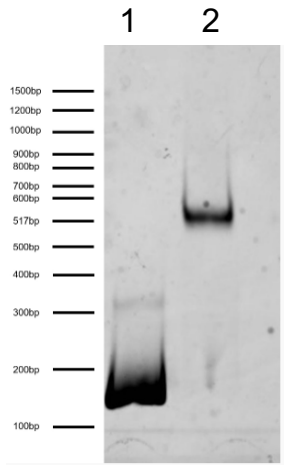
Western Blot Data: Western Analysis of H4K20me1 dNuc. **Top Panel:** Unmodified H4 nucleosomes (Catalog No. 16-0006; Lane 1) and H4K20me1 nucleosomes (Lane 2) were probed with an anti-H4K20me1 antibody and analyzed via ECL readout. Only the H4K20me1 sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel showing unmodified (Lane 1) and H4K20me1 nucleosomes (Lane 2).



Mass Spec Data: Synthetic H4K20me1 histone analyzed by high resolution mass spectrometry. Expected mass = 11,250.1 Da. Determined mass = 11,249.3 Da.



Protein Gel Data: Coomassie stained PAGE gel of proteins in H4K20me1 dNuc (2 µg) to demonstrate the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3 and H4K20me1) are indicated.



DNA Gel Data: H4K20me1 dNuc resolved via native PAGE gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (Catalog No. 18-0005; 100 ng). **Lane 2:** Intact H4K20me1 nucleosomes (400 ng).