

Nucleosome, Recombinant Human, H3K9me3 dNuc, Biotinylated

Catalog No 16-0315-20
Lot No 22032007-01
Pack Size 20 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; H3.2-Q71DI3*; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA. Histone H3 (created by a proprietary semi-synthetic method) contains trimethyl-lysine at position 9. The nucleosome is the basic subunit of chromatin. The 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.

*H3.2K9me3 has a Cys to Ala substitution at position 110.

Formulation:

H3K9me3 dNuc (27.3 µg protein weight, 50 µg DNA + protein) in 20.0 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 5.0 µM. MW = 199,760 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:

H3K9me3 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.



EpiCypher®

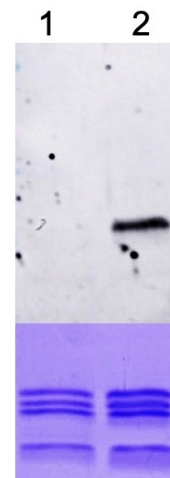


Figure 1: Western blot data. Western Analysis of H3K9me3 dNuc. **Top Panel:** Unmodified nucleosomes (EpiCypher 16-0006; Lane 1) and H3K9me3 nucleosomes (Lane 2) were probed with an anti-H3K9me3 antibody and analyzed via ECL readout. Only the H3K9me3 sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained protein gel showing unmodified (Lane 1) and H3K9me3 nucleosomes (Lane 2).

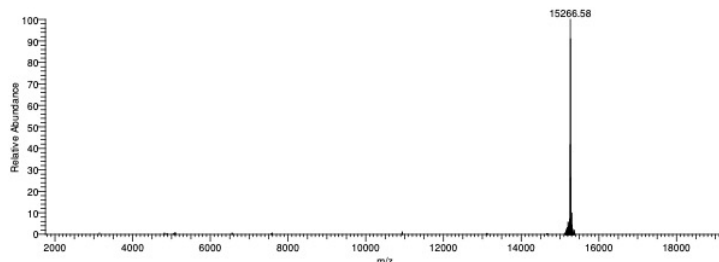


Figure 2: Mass spec data. Synthetic H3K9me3 histone analyzed by high resolution mass spectrometry. Expected mass = 15,266.8 Da. Determined mass = 15,266.58 Da.

This product is for *in vitro* research use only and is not intended for use in humans or animals.

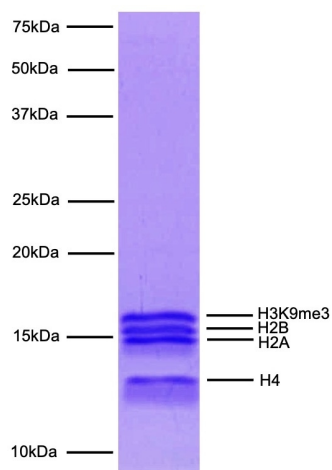


Figure 3: Protein gel data. Coomassie stained PAGE gel of proteins in H3K9me3 dNuc (1 μ g) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3K9me3 and H4) are indicated.

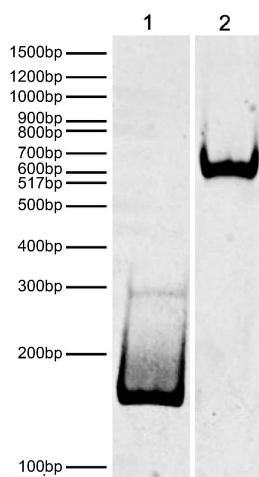


Figure 4: DNA gel data. H3K9me3 dNuc resolved via native PAGE and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-0005; 100 ng). **Lane 2:** Intact H3K9me3 nucleosomes (400 ng).

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