

Nucleosome, Recombinant Human, H3K4me3 dNuc, Non-Biotinylated



EpiCypher®

Catalog No 16-1316

Lot No 20322003-30

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; H3.2-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 4. 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. *H3K4me3 has a Cys to Ala substitution at position 110.

Formulation:

H3K4me3 dNuc (27.3 µg protein weight, 50 µg DNA + protein) in 43.1 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 5.79 µM. MW = 199,250.1.

Application Notes:

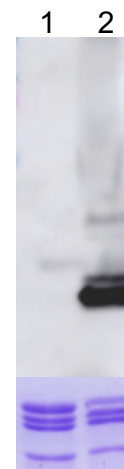
H3K4me3 dNuc is highly purified and suitable for a variety of applications, including use as a substrate in enzymatic assays or for effector protein binding experiments.

Storage and Stability:

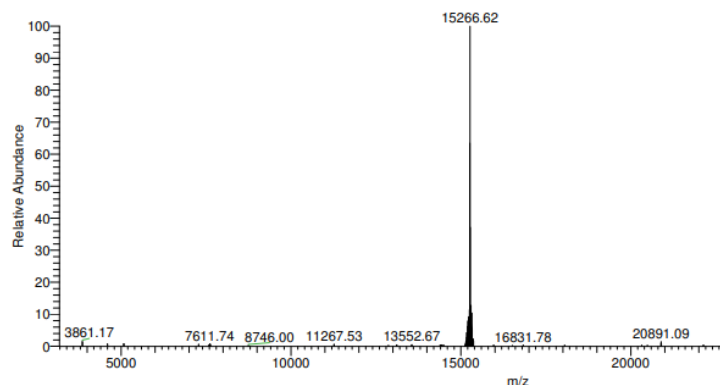
Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.

References:

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

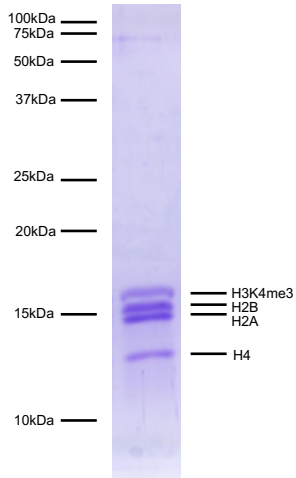


Western Blot Data: Western Analysis of H3K4me3 dNuc. **Top Panel:** Unmodified nucleosomes (EpiCypher 16-0009; Lane 1) and H3K4me3 nucleosomes (Lane 2) were probed with an anti-H3K4me3 antibody and analyzed via ECL readout. Only the H3K4me3 sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel showing unmodified nucleosomes (Lane 1) and H3K4me3 nucleosomes (Lane 2).

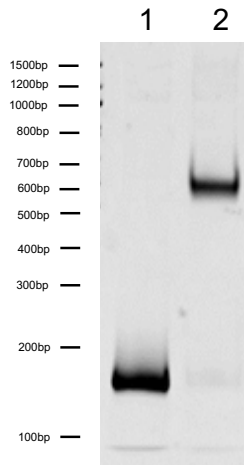


Mass Spec Data: Synthetic H3K4me3 histone analyzed by high resolution mass spectrometry. Expected mass = 15,267.77 Da. Determined mass = 15,266.62 Da.

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



Protein Gel Data: Coomassie stained PAGE gel of proteins in H3K4me3 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, H3K4me3 and H4) are indicated.



DNA Gel Data: H3K4me3 dNuc resolved via native PAGE gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-0006; 100 ng). **Lane 2:** Intact H3K4me3 nucleosomes (400 ng).

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