

# Nucleosome, Recombinant Human, H3K4me2 dNuc

**Catalog No.** 16-0334  
**Lot No.** 17037001  
**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 dimethyl-lysine at position 4. The nucleosome is the basic subunit of chromatin. The 601 sequence, identified by Lowary and Widom, is a 147-base pair sequence that has high affinity for histone octamers and is useful for nucleosome assembly and contains a 5' biotin-TEG group.  
\* H3.2 K4me2 has a Cys to Ala substitution at position 110.

## Formulation:

Nucleosome, Recombinant Human, H3K4me2 (27.3 µg protein weight, 50 µg total weight) in 100 µl of 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 2.49 µmolar. MW = 200,493.

## Storage and Stability:

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

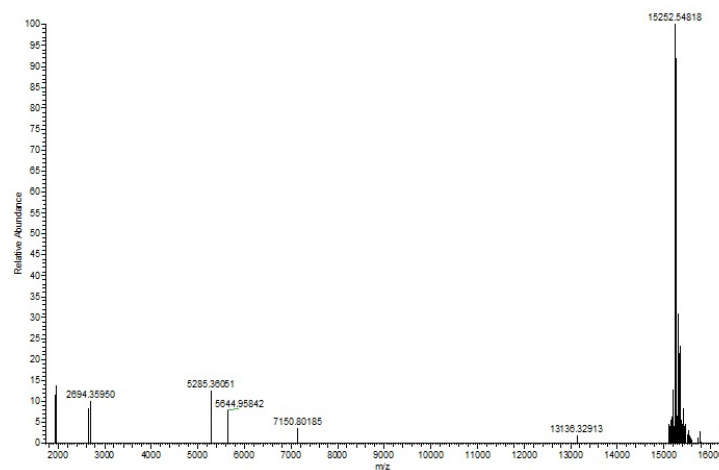
## Application Notes:

Nucleosome, Recombinant Human, H3K4me2 dNucs are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein binding experiments. **Nucleosome, Recombinant Human, H3K4me2 from EpiCypher contains no free DNA which could alter assayed activities.**

## References Using this Product:

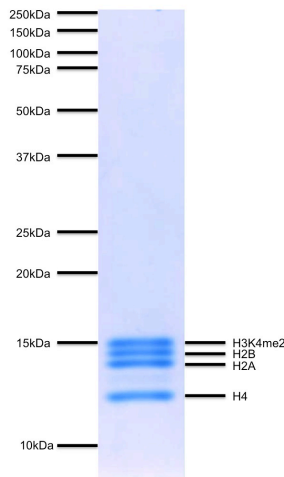


**Western Blot Data:** Western Analysis of Nucleosome, Recombinant Human, H3K4me2. **Top Panel:** Unmodified H3 (Lane 1) and H3K4me2 containing nucleosomes (Lane 2) were probed with an anti-H3K4me2 antibody and analyzed via ECL readout. Only the H3K4me2 sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel showing unmodified nucleosomes (Lane 1) and H3K4me2 nucleosomes (Lane 2).

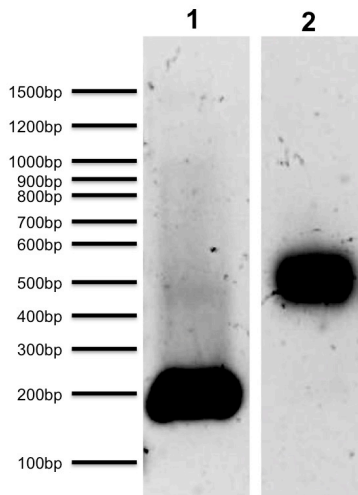


**Mass Spec Data:** Synthetic H3K4me2 protein analyzed by nanospray-orbitrap high resolution mass spectrometry. Expected mass = 15252.8 Da. Determined mass = 15,252.5 Da.

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 Nucleosome, Recombinant Human, H3K4me2 (1  $\mu$ g) to demonstrate the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3K4me2 and H4) are indicated.



**DNA Gel Data:** Nucleosome, Recombinant Human, H3K4me2 run on an agarose gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA extracted from nucleosomes (200 ng). **Lane 2:** Intact nucleosomes (400 ng).