Nucleosome, Recombinant Human, H3K4ac dNuc, Biotinylated

Catalog No. 16-0342
Lot No. 18305001
Pack Size 50ug

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 acetyl-lysine at positions 4. The nucleosome is the basic subunit of chromatin. The 601 sequence, identified by Lowary and Widom, is a 147-base pair sequece that has high affinity for histone octamers and is useful for nucleosome assembly and contains a 5' biotin-TEG group.
* H3K4ac also has a Cys to Ala substitution at position 110.

Formulation:

Nucleosome, Recombinant Human, H3K4ac (27.3 µg protein weight, 50 µg total weight) in 66.7 µl of 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol.
Molarity = 3.75 µmolar. MW = 199,789 Da.

Storage and Stability:

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

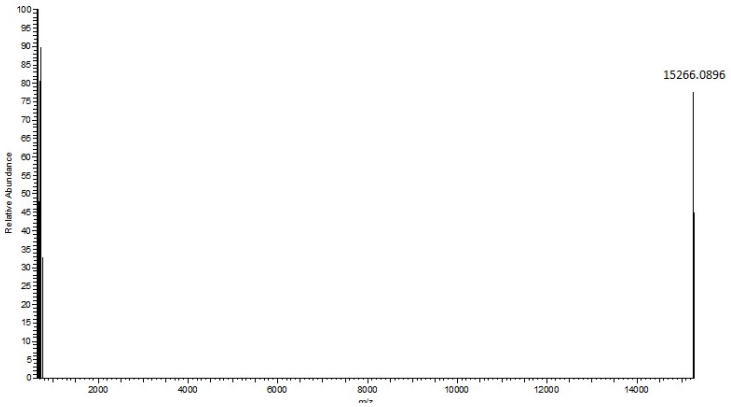
Application Notes:

Nucleosome, Recombinant Human, H3K4ac dNucs are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein binding experiments. **Nucleosome, Recombinant Human, H3K4ac dNucs from EpiCypher does not contain free DNA which could alter assayed activities.**

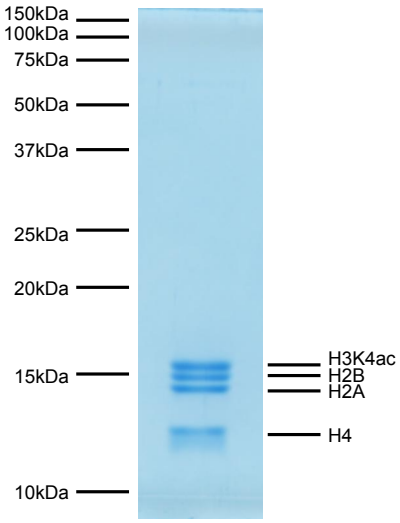
References:

Lowary PT and J Widom (1998). *J Mol Biol* 276: 19-42.
Luger K et al (1999). *Methods Mol Biol* 119: 1-16.

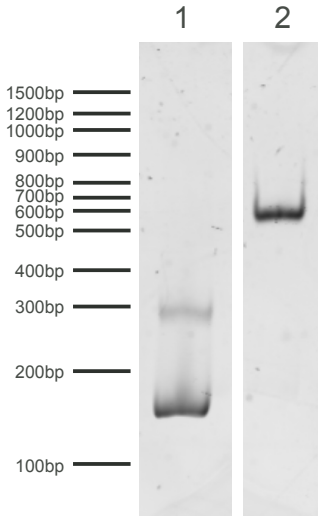
Western Blot Data: Western Analysis of Nucleosome, Recombinant Human, H3K4ac. **Top Panel:** Unmodified H3 (Lane 1) and H3K4ac containing nucleosomes (Lane 2) were probed with an anti-H3K4ac antibody and analyzed via ECL readout. Only the H3K4ac sample produced a detectable signal. **Bottom Panel:** Detailfrom Coomassie stained gel showing unmodified nucleosomes (Lane 1) and H3K4ac nucleosomes (Lane 2).



Mass Spec Data: H3K4ac protein analyzed by high resolution mass spectrometry. Expected mass = 15,266.8 Da. Determined mass = 15,266.1 Da.



Protein Gel Data: Coomassie stained PAGE gel of proteins in Nucleosome, Recombinant Human, H3K4ac(1 µg) to demonstrate the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3K4ac and H4) are indicated.



DNA Gel Data: Nucleosome, Recombinant Human, H3K4ac run on a native PAGE gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (100 ng). **Lane 2:** Intact nucleosomes (400 ng).