Nucleosome, Recombinant Human, H3K9bu dNuc, Biotinylated

Catalog No. 16-0371
Lot No. 20121002-50
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 synthetic method) contains butyryl-lysine at position 9. 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.
* H3K9bu also has a Cys to Ala substitution at position 110.

Formulation:

Nucleosome, Recombinant Human, H3K9bu (27.4 µg protein weight, 50 µg DNA+protein) in 62.5 µL 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 4.0 µmolar. MW = 199,903.5 Da

Storage and Stability:

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

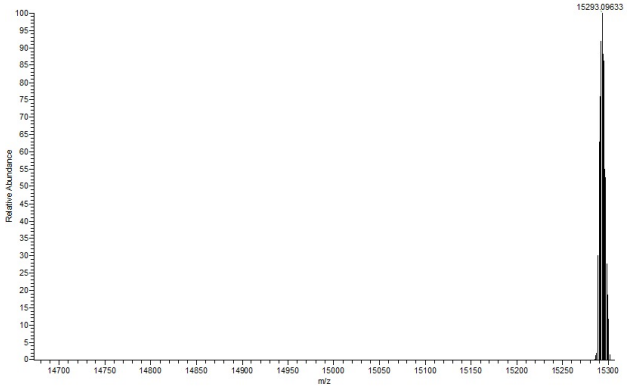
Application Notes:

Nucleosome, Recombinant Human, H3K9bu dNucs are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein binding experiments. **Nucleosome, Recombinant Human, H3K9bu dNucs from EpiCypher does not contain free DNA which could alter assayed activities.**

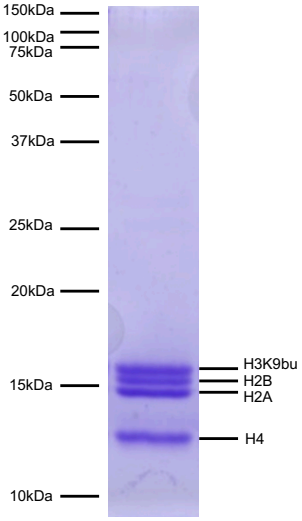
References:

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

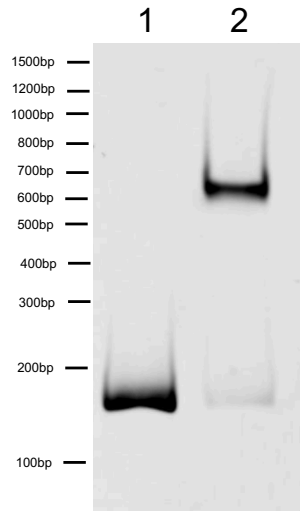
Western Blot Data: Western Analysis of Nucleosome, Recombinant Human, H3K9bu. **Top Panel:** Unmodified H3 (Lane 1) and H3K9bu containing nucleosomes (Lane 2) were probed with an anti-H3K9bu antibody and analyzed via ECL readout. Only the H3K9bu sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel showing unmodified nucleosomes (Lane 1) and H3K9bu nucleosomes (Lane 2).



Mass Spec Data: H3K9bu protein analyzed by high resolution mass spectrometry. Expected mass = 15293.8 Da. Determined mass = 15293.1 Da.



Protein Gel Data: Coomassie stained PAGE gel of proteins in Nucleosome, Recombinant Human, H3K9bu (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, H3K9bu and H4) are indicated.



DNA Gel Data: Nucleosome, Recombinant Human, H3K9bu 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).