Nucleosome, Recombinant Human, H4 K12Ac dNuc

Catalog No. 16-0312
Lot No. 17031003
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; H3.1-P68431; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA. Histone H4 (created by a proprietary fully synthetic method) contains acetyl-lysine at position 12. 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.

Western Blot Data: Western blot analysis of Nucleosome, Recombinant Human, H4 K12Ac. **Top Panel:** Unmodified recombinant H4 (Lane 1) and H4K12Ac containing nucleosomes (Lane 2) were probed with an anti-H4K12Ac antibody and detected via ECL. Only the H4K12Ac dNuc sample produced a detectable signal. **Bottom Panel**: Detail from Coomassie stained gel showing recombinant H4 protein (Lane 1) and all four histones from H4 K12Ac nucleosome (Lane 2).

Formulation:

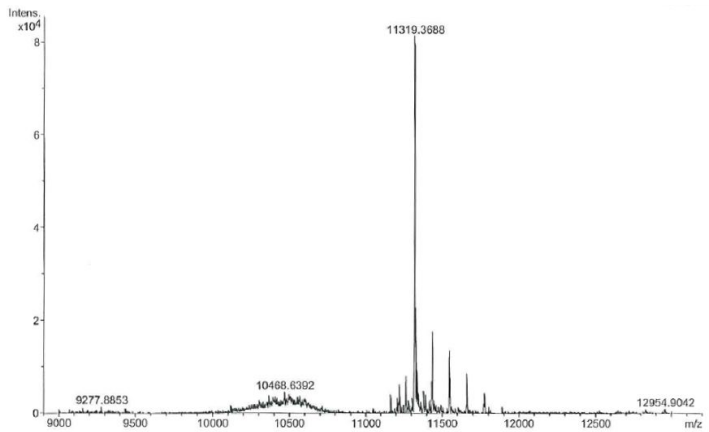
Nucleosome, Recombinant Human, H4 K12Ac (27.3 µg protein weight, 50.0 µg DNA+protein) in 21.2 µl 10mM Tris HCl, pH 7.5, 25mM NaCl, 1mM EDTA, 2mM DTT, 20% glycerol. Molarity = 10.78 µmolar. MW = 200,905 Da.

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:

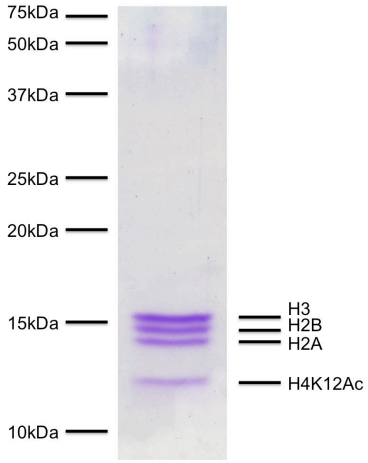
Nucleosome, Recombinant Human, H4 K12Ac are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein (especially bromodomain) binding experiments. **Nucleosome, Recombinant Human, H4 K12Ac from EpiCypher does not contain free DNA which could alter assayed activities.**



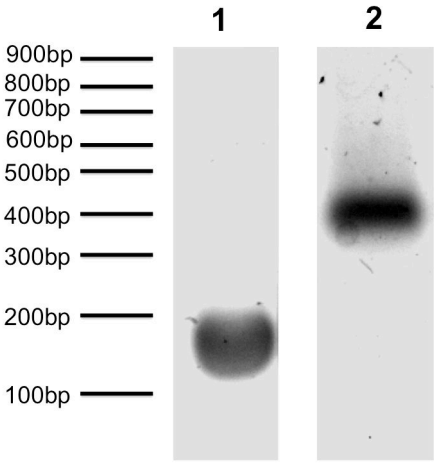
Mass Spec Data: Synthetic H4 K12Ac protein analyzed by ESI-TOF mass spectrometry. Expected mass = 11320.2 Da. Determined mass = 11319.4 Da (difference due to the weight of a single proton). The small peak at 10468 is an artifact of the algorithm that deconvolutes the charge/mass ratio data into a single peak.

References Using this Product:

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, H4 K12Ac (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, H3 and H4K12Ac) are indicated.



DNA Gel Data: Nucleosome, Recombinant Human, H4 K12Ac 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).