

# 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 sequence that has high affinity for histone octamers and is useful for nucleosome assembly and contains a 5' biotin-TEG group.

## 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:

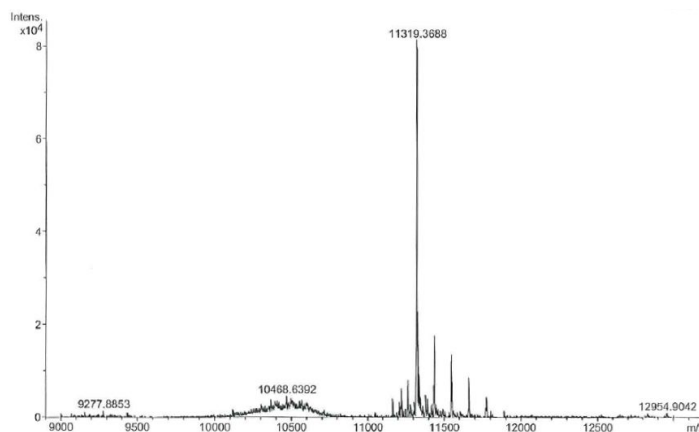
Nucleosome, Recombinant Human, H4 K12Ac are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein (especially bromodomain) binding experiments. **Nucleosome, Recombinant Human, H4 K12Ac from EpiCypher does not contain free DNA which could alter assayed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

## References Using this Product:

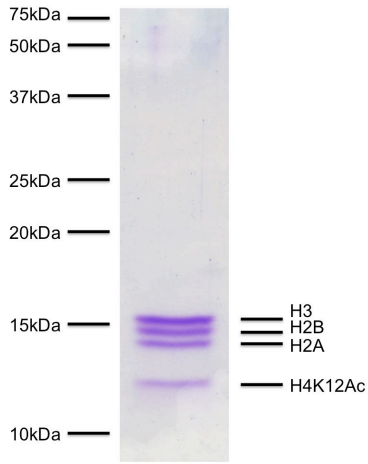
This product is for *in vitro* research use only and is not intended for use in humans or animals.



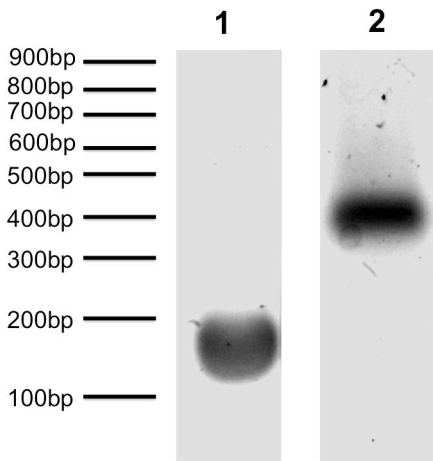
**Western Blot Data:** Western blot analysis of Nucleosome, Recombinant Human, H4 K12Ac. **Top Panel:** Unmodified recombinant H4 (Lane 1) and H4K12Ac containing nucleosomes (Lane 2) were probed with an anti-H4K12Ac antibody and detected via ECL. Only the H4K12Ac dNuc sample produced a detectable signal.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



**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.



**Protein Gel Data:** Coomassie stained PAGE gel of proteins in Nucleosome, Recombinant Human, H4 K12Ac (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, 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).