

# Mononucleosomes, Recombinant Human

**Catalog No.** 16-0009  
**Lot No.** 15321002  
**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 sequence DNA. The nucleosome is the basic subunit of chromatin. The 601 sequence, identified by Lowary and Widom, has high affinity for histone octamers and is useful for nucleosome assembly.

## Formulation:

Purified recombinant mononucleosomes at 0.6 mg/ml (50 µg protein by mass, 91.8 µg protein+DNA in 87.5 µl) in 10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, 20% glycerol. Concentration of nucleosomes is 5.24 µM. Nucleosome molecular weight = 200,253 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:

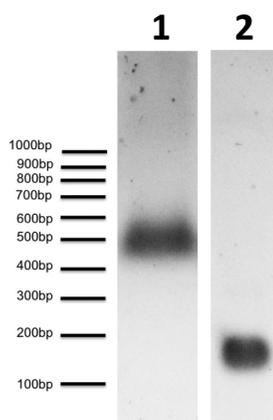
Recombinant mononucleosomes are highly purified and are suitable for use as substrates in enzyme screening assays or for nucleosome binding experiments. The absence of post-translational histone modifications makes them ideal for conducting enzyme activity and screening assays. **EpiCypher Mononucleosomes, Recombinant do not contain free DNA which could alter assayed activities.**

## References:

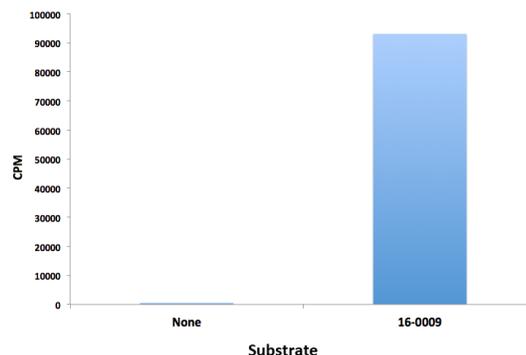
Lowary PT and J Widom (1998). *J Mol Biol* 276: 19-42.  
Luger K et al (1999). *Methods Mol Biol* 119: 1-16.



**Protein Gel Data:** Coomassie stained PAGE gel of proteins in Mononucleosomes, Recombinant (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 H4) are indicated.



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



## Histone Methyltransferase Assay Data:

Mononucleosomes, Recombinant Human used as a substrate in a radioactive histone methyltransferase assay with (SET8) or without (None) recombinant SET8, which is an HMTase requires nucleosomal substrates for activity.