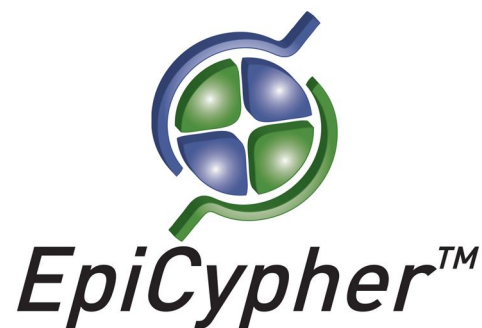


Mononucleosomes, Recombinant Human Biotinylated

Catalog No. 16-0006
Lot No. 17030008
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 with a 5' biotin-TEG group. The nucleosome is the basic subunit of chromatin.

Formulation:

Purified recombinant mononucleosomes (50 µg total mass, 27.3 µg protein + 23.7 µg DNA in 25.26 µl) in 10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, & 20% glycerol. Concentration of nucleosomes is 9.86 µM. Nucleosome molecular weight = 200,952 Da.

Storage and Stability:

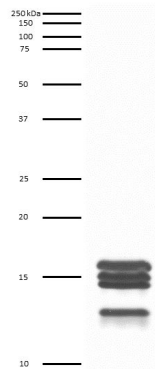
Stable for six (6) months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.

Application Notes:

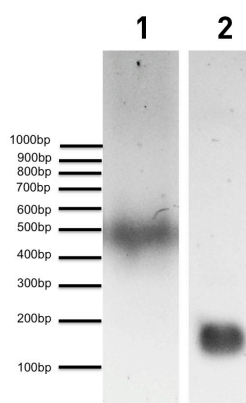
Mononucleosomes, Human Recombinant Biotinylated are highly purified and are suitable for use as substrates in enzyme screening assays or for nucleosome binding experiments. The absence of post-translational histone modifications makes this product ideal for conducting enzyme activity and screening assays. The biotin group on the DNA makes pull-down experiments possible, allowing you to isolate the nucleosomes after your assay is complete. **EpiCypher Mononucleosomes, Recombinant Human Biotinylated do not contain free DNA which could alter assayed activities.**

References:

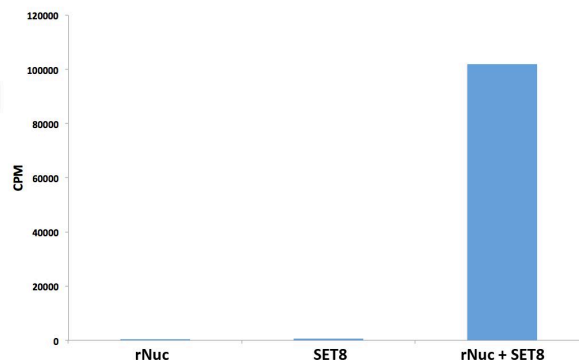
Lowary PT and J Widom (1998). *J Mol Biol* 276: 19-42.
Luger K et al (1999). *Methods Mol Biol* 119: 1-16.



Protein Gel Data: Coomassie stained PAGE gel of proteins in Mononucleosomes, Recombinant Human Biotinylated (1 µg) demonstrates 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 Human Biotinylated run on an agarose gel and stained with ethidium bromide to visualize DNA. **Lane 1:** Intact nucleosomes (400 ng). **Lane 2:** DNA extracted from nucleosomes (100 ng).



Histone Methyltransferase Assay Data: Mononucleosomes, Recombinant Human Biotinylated used as a substrate in a radioactive histone methyltransferase assay with recombinant SET8 and a variety of other substrates as indicated. The highest level of SET8 HMTase activity was observed using recombinant nucleosomes (rNucs), indicating that SET8 requires nucleosomes substrates for detection of full activity.