

Recombinant Human Nucleosome H3K4me2 dNuc, Biotinylated

Cat. No. NUC-013 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Dinucleosomes assembled from recombinant human histones expressed in E. coli.
Species	Human
Source	E.coli
Description	dinucleosomes 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 H3 (created by a proprietary synthetic method) contains dimethyl-lysine at position 4. 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.
Form	Nucleosome, Recombinant Human, H3K4me2 (50 µg total mass, DNA+protein, 27.3 µg protein weight) in 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol.
Molecular Mass	200,463 Da
Applications	Nucleosome, Recombinant Human, H3K4me2 are highly purified and are suitable for use as substrates in enzyme screening assays or for effector protein binding experiments.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Storage

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

Conjugation

Biotin

**Western Blot Data of
NUC-013**


Western Analysis of Nucleosome, Recombinant Human, H3K4me2. Top Panel: Unmodified H3 (Lane 1) and H3K4me2 containing nucleosomes (Lane 2) were probed with an anti-H3K4me2 antibody and analyzed via ECL readout. Only the H3K4me2 sample produced a detectable signal.

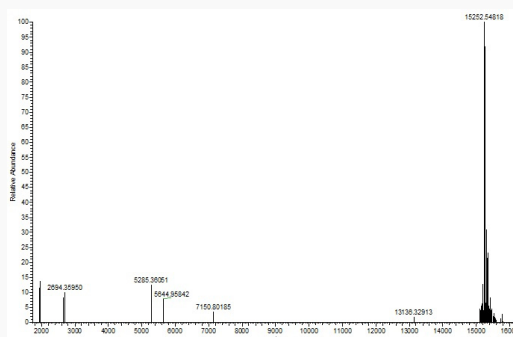
Bottom Panel: Detail from Coomassie stained gel showing unmodified nucleosomes (Lane 1) and H3K4me2 nucleosomes (Lane 2).

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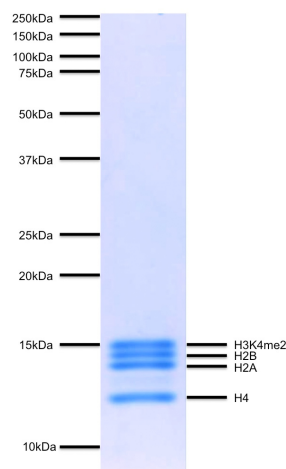
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Mass Spec Data of NUC-013



Synthetic H3K4me2 protein analyzed by nanospray-orbitrap high resolution mass spectrometry. Expected mass = 15,252.8 Da. Determined mass = 15,252.5 Da.

Protein Gel Data of NUC-013



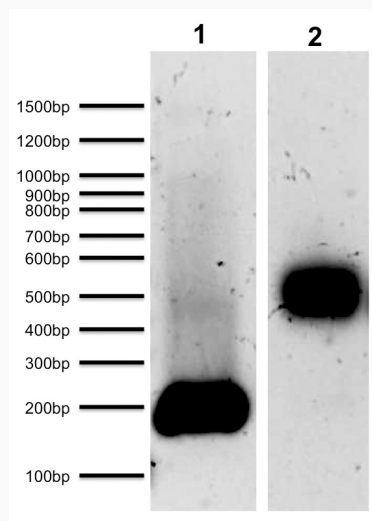
Coomassie stained PAGE gel of proteins in Nucleosome, Recombinant Human, H3K4me2 (1 g) to demonstrate the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3K4me2 and H4) are indicated.

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**DNA Gel Data of
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Nucleosome, Recombinant Human, H3K4me2 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).