

Mononucleosomes (H3.3K27M), Recombinant Human

Catalog No 16-0323

Lot No 21214004-07

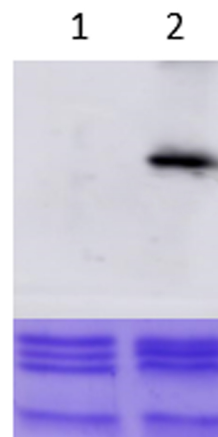
Pack Size 100 µg



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Product Description:

Mononucleosomes assembled from recombinant human histones expressed in *E. coli* (two each of histones H2A, H2B, H3.3 and H4; accession numbers: H2A-P04908; H2B-O60814; H3.3-P84243; H4-P62805) wrapped by 147 base pairs of 601 positioning sequence DNA. Histone H3.3 is a non-allelic replacement found in regions of high chromatin turnover outside of S-phase (e.g. at actively transcribed genes). The substitution of M for K at position 27 is a dominant negative inhibitor of the EZH2 methyltransferase complex PRC2 and is associated with pediatric brain cancer (DIPG) [1]. The nucleosome is the basic subunit of chromatin. The 147 bp 601 sequence, identified by Lowary and Widom [2], has high affinity for histone octamers and is useful for nucleosome assembly.



Western Blot Data: Western analysis of Mononucleosomes (H3.3K27M), Recombinant Human. **Top Panel:** Wild-type H3.3 (Lane 1) and H3.3K27M nucleosomes (Lane 2) were probed with an H3K27M antibody. Only the H3.3K27M sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel of Western blot.

Formulation:

H3.3K27M Mononucleosomes (54.6 µg protein weight, 100.0 µg DNA + protein) in 90.9 µL 10 mM Tris HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol. Molarity = 5.5 µM. MW = 199,844 Da.

Application Notes:

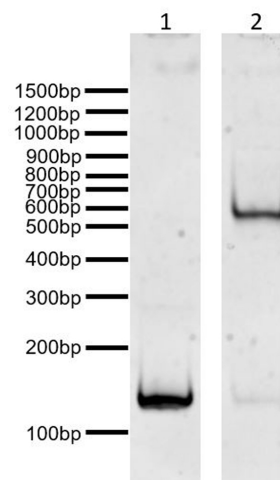
H3.3K27M Mononucleosomes is highly purified and suitable for a variety of applications, including use as a substrate in enzymatic assays or for effector protein binding experiments.

Storage and Stability:

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

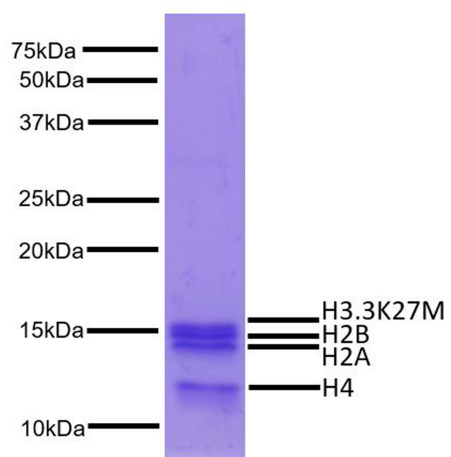
References:

- [1] Chan et al. (2013) *Genes Dev* 27:985-990.
- [2] Lowary & Widom *J. Mol. Biol.* (1998). PMID: 9514715



DNA Gel Data: H3.3K27M Mononucleosomes resolved via Native PAGE and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA extracted from nucleosomes (100 ng). **Lane 2:** Intact nucleosomes (400 ng).

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 H3.3K27M Mononucleosomes (1 μ g) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3.3K27M and H4) are indicated.

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