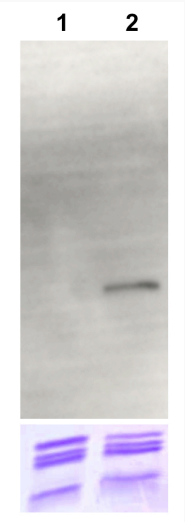
Recombinant Human Mononucleosomes (H3.3 K27M)

Cat. No. NUC-048 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human histone H3.3 (H3F3A, H3.3A, H3F3, accession P84243) containing a methionine at position 27, expressed in E. coli.
Species	Human
Source	E.coli
Description	Recombinant human histone H3.3 (H3F3A, H3.3A, H3F3, accession P84243) containing a methionine at position 27, expressed in E. coli. Histone H3 is one of the four proteins that are present in the nucleosome, the basic repeating unit subunit of chromatin, consisting of 147 base pairs of DNA wrapped around an octamer of core histone proteins (H2A, H2B, H3 and H4). H3.3 is a histone variant, a non-allelelic replacement histone 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 in human H3.1 and H3.3 is a dominant negative inhibitor of the EZH2 methytransferase complex PRC2 and is associated with pediatric brain cancer (DIPG).
Form	Mononucleosomes (H3.3 K27M), Recombinant Human (100 µg total mass, DNA+protein, 54.6 µg protein weight,) 10 mM Tris HCl, pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, 20% glycerol.
Molecular Mass	199,844 Da
Applications	Mononucleosomes (H3.3 K27M), Recombinant Human are highly purified and are suitable for use as substrates in enzyme screening assays or for nucleosome binding

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

	experiments. The absence of post-translational histone modifications makes them ideal for conducting enzyme activity and screening assays. Mononucleosomes (H3.3 K27M), Recombinant Human do not contain free DNA which could alter assayed activities.
Storage	Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid multiple freeze/thaws.
Western Blot Data	 Western analysis of Mononucleosomes (H3.3 K27M), Recombinant Human. Top Panel: Unmodified H3.3 (Lane 1) and H3.3 K27M containing nucleosomes (Lane 2) were probed with an anti-H3 K27M antibody. Only the H3.3 K27M sample produced a detectable signal. Bottom Panel: Detail from Coomassie stained gel of Western blot.

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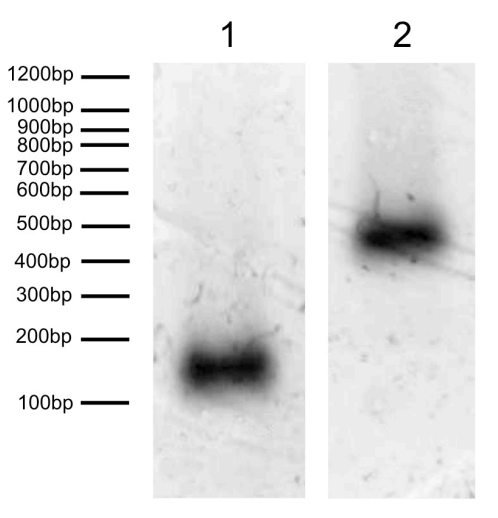
DNA Gel Data



Mononucleosomes (H3.3 K27M), Recombinant Human run on an agarose gel and stained with ethidium bromide to visualize DNA. Lane 1: Intact nucleosomes (200 ng total, ~100 ng DNA and ~100 ng histone protein) run on gel. Lane 2: Intact nucleosomes (400 ng). Nucleosomal DNA migrates much higher than free DNA, thus the DNA resolves at a higher molecular weight when nucleosome-bound. Note absence of free DNA in Lane 1, indicating all DNA complexed with histones.

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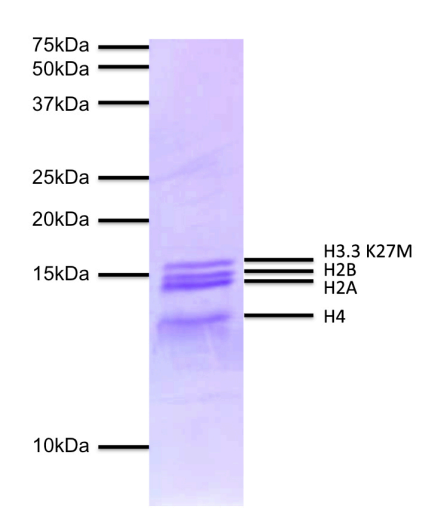
Protein Gel Data



Coomassie stained PAGE gel of proteins in Mononucleosomes (H3.3 K27M), Recombinant Human (1 µg) to demonstrate the purity and integrity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3.3 K27M and H4) are indicated.

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