

# Mononucleosomes (H3.3G34V), Recombinant Human Biotinylated



EpiCypher™

**Catalog No.** 16-0347  
**Lot No.** 17211001  
**Pack Size** 50 µg

## Product Description:

Recombinant human histone H3.3 (H3F3A, H3.3A, H3F3, accession P84243) containing a valine at position 34, 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-allelic replacement histone found in regions of high chromatin turnover outside of S-phase (e.g. at actively transcribed genes). The substitution of V for G at position 34 is associated with pediatric diffuse intrinsic pontine gliomas (DIPGs) with and diminished levels of H3K36 methylation. 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.

## Formulation:

Mononucleosomes (H3.3G34V), Recombinant Human (27.3 µg protein weight, 50 µg DNA+protein) in 37.6 µl 10mM Tris HCl, pH 7.5, 25mM NaCl, 1 mM EDTA, 2mM DTT, 20% glycerol. Molarity = 6.63 µmolar. MW = 200,621.

## Storage and Stability:

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

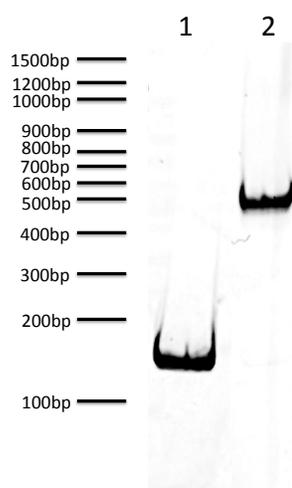
## Application Notes:

Mononucleosomes (H3.3G34V), Recombinant Human are highly purified and are suitable for use as substrates in enzyme screening assays, structural studies or for effector protein binding experiments. **Mononucleosomes (H3.3G34V), Recombinant Human from EpiCypher do not contain free DNA which could alter assayed activities.**

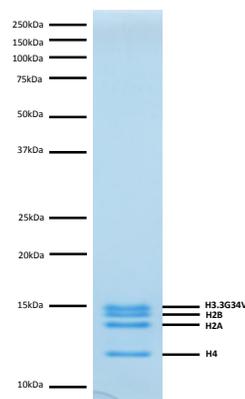
## References:



**Western Blot Data:** Western analysis of Mononucleosomes (H3.3G34V), Recombinant Human. **Top Panel:** Wildtype H3.3 (Lane 1) and H3.3G34V containing nucleosomes (Lane 2) were probed with an anti-H3.3G34V antibody. Only the H3.3G34V sample produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel of Western blot.



**DNA Gel Data:** Mononucleosomes (H3.3G34V), Recombinant Human 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).



**Protein Gel Data:** Coomassie stained PAGE gel of proteins in Mononucleosomes (H3.3G34V), Recombinant Human (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, H3.3G34V and H4) are indicated.

This product is for *in vitro* research use only and is not intended for use in humans or animals.



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