Technical datasheet

rNuQ H3.1 recombinant mononucleosome

Part number: NUC0001

Species: *Human*

Source: *E. coli* and synthetic DNA

Description:
Recombinant nucleosomes were assembled *in vitro* using a 147 bp of 601 [1] positioning sequence DNA and four core histones (H2A, H2B, H3.1 and H4) purified from *E. coli* inclusion bodies.

Buffer composition: Triethanolamine hydrochloride - NaCl - EDTA - Azide.

Applications: Human recombinant mononucleosomes are suitable for chromatin remodeling and accessibility studies, post-translational modifications (PTM)-specific antibody validation [2], chromatin research [3], as well as nucleosome binding assays in drug discovery and high-throughput screening (HTS) applications [4,5].

Validation data:

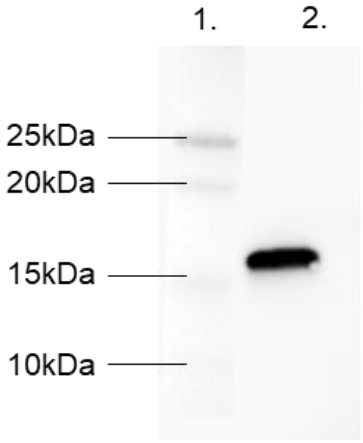

Figure 1 : Western blot analysis of rNuQ H3.1 mononucleosome. Lane 1 contains the protein ladder. Lane 2 contains unmodified rNuQ H3.1 recombinant mononucleosomes (200ng; Volition, NUC0001). Probing with an anti-H3.1 antibody followed by ECL detection reveals a signal corresponding to the rNuQ H3.1 recombinant mononucleosomes.

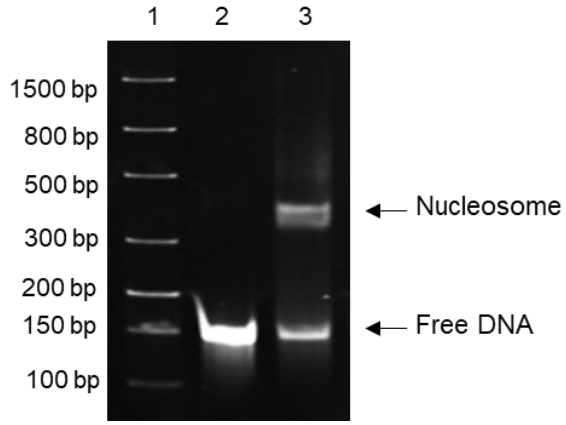

Figure 2 : Native PAGE analysis of rNuQ H3.1 mononucleosomes. Lane 1 contains the DNA ladder, lane 2 shows free 147bp 601 DNA, and lane 3 shows intact rNuQ H3.1 nucleosomes (500 ng). Samples were resolved on a native PAGE gel and stained with Midori Green to visualize DNA. Intact nucleosomes, in lane 3, display reduced mobility relative to free DNA, consistent with correct nucleosome assembly.

Storage and stability: This product must be stored at 2-8°C and is stable for 6 months from date of receipt. Do not freeze. Use surface optimized tubes (e.g. low bind tubes) and tips for handling and storage.

Precautions: This product is for research use only. Not for use in diagnostic procedures. Not intended for use in humans or animals.

Gene and protein information:

UniProt ID :

H2A - P04908
H2B - O60814
H3.1 - P68431
H4 - P62805

References:

[1] Lowary & Widom, 1998, J. Mol. Biol., 276:19–42.
[2] Van den Ackerveken et al., 2025, J. Biol. Chem., 301:110352
[3] Van den Ackerveken et al., 2021, *Sci. Rep.*, 11:7256.
[4] Kepert et al. (2003), *Biophys. J.*, 85:4012–4022.
[5] Maluchenko *et al.*, 2022, *Cells*, 11(21):3343