Mononucleosomes, Recombinant Human, Non-Biotinylated

Catalog No	16-0009	**Species**	Human
Lot No	23215019-02	**Source**	*E. coli* & synthetic DNA
Pack Size	100 µg	**Tag**	None
Concentration	5.2 µM	**MW**	199,260.8 Da

DESCRIPTION

Recombinant mononucleosomes (rNucs) consist of 147 base pairs of DNA wrapped around an octamer of core histone proteins (two each of H2A, H2B, H3.1, and H4) to form a nucleosome, the basic repeating unit of chromatin. The 147 bp 601 sequence, identified by Lowary and Widom [1], has high affinity for histone octamers and is useful for nucleosome assembly.

TECHNICAL INFORMATION

Storage	Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid freeze/thaws.
Formulation	1.03 mg/mL mononucleosome in 97.0 µL 10 mM Tris-HCl pH 7.5, 25 mM NaCl, 1 mM EDTA, 2 mM DTT, and 20% glycerol. (54.6 µg protein, 100 µg DNA + protein).

APPLICATION NOTES

rNuc is highly purified and suitable for a variety of applications, including use as a substrate in enzyme assays, high-throughput screening and inhibitor testing, chromatin binding studies, protein-protein interaction assays, structural studies, and in effector protein binding experiments.

GENE & PROTEIN INFORMATION

UniProt ID	H2A - P04908 (alt. names: H2A type 1-B/E, H2A.2, H2A/a, H2A/m) H2B - O60814 (alt. names: H2B K, HIRA-interacting protein 1) H3.1 - P68431 (alt.names: H3, H3/a, H3/b, H3/c, H3/d) H4 - P62805

REFERENCES

[1] Lowary & Widom *J. Mol. Biol.* (1998). PMID: 9514715

VALIDATION DATA

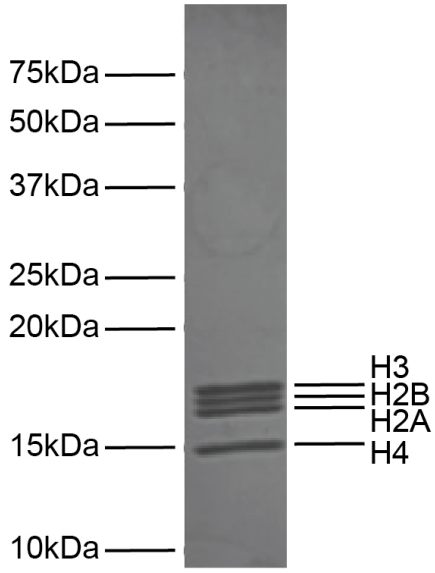

FIGURE 1 **Protein gel data.** Coomassie stained PAGE gel of proteins in Recombinant Mononucleosomes (1 µg) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3, and H4) are indicated.

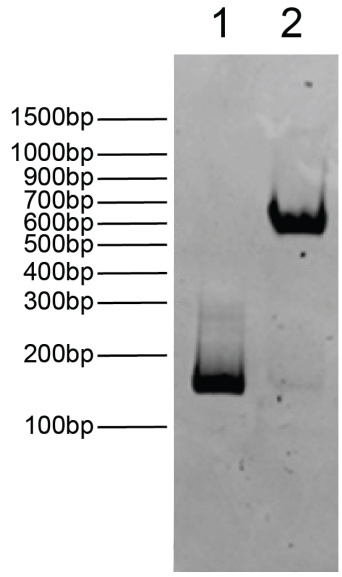

FIGURE 2 **DNA gel data.** Recombinant Mononucleosomes resolved via native PAGE and stained with ethidium bromide to visualize DNA. **Lane 1:** Free DNA (EpiCypher 18-0006; 100 ng). **Lane 2:** Intact nucleosomes (400 ng).