Mononucleosomes (H2AZ.1), Human Recombinant Biotinylated

Catalog No	16-0014	**Species**	Human
Lot No	17032001	**Source**	*E. coli* & synthetic DNA
Pack Size	50 µg	**Tag**	Biotinylated
Concentration	5.02 µM	**MW**	199,125 Da

DESCRIPTION

Mononucleosomes assembled from recombinant human histones expressed in *E. coli* (two each of histones H2AZ.1, H2B, H3, and H4) wrapped by 147 base pairs of 601 positioning sequence DNA with a 5' biotin-TEG group. The nucleosome is the basic subunit of chromatin. H2AZ.1 and H2AZ.2 are variants of histone H2A and implicated in diverse cellular functions ranging from transcriptional regulation, chromosome transmission and DNA damage repair. H2AZ has a dedicated deposition machinery (the SWR-C ATPase).

TECHNICAL INFORMATION

Storage	Stable for six months at -80°C from date of receipt. For best results, aliquot and avoid freeze/thaws.
Formulation	1.0 mg/mL purified recombinant mononucleosomes (27.4 µg protein by mass, 50 µg protein + DNA) in 50.0 µL 10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, 20% glycerol.

APPLICATION NOTES

Mononucleosomes (H2AZ.1), Human Recombinant Biotinylated are highly purified and are suitable for use as substrates in enzyme screening assays or for nucleosome binding experiments. The absence of post-translational histone modifications makes them ideal for conducting enzyme activity and screening assays. EpiCypher Mononucleosomes (H2AZ.1), Human Recombinant Biotinylated do not contain free DNA which could alter assayed activities.

GENE & PROTEIN INFORMATION

UniProt ID	H2AZ.1 - P0C0S5 (alt. names: H2A.Z, H2AFZ) H2B - O60814 (alt. names: H2B K, HIRA-interacting protein 1) H3.1 - P68431 H4 - P62805

REFERENCES

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

Luger et. al. (1999) *Methods Mol. Biol.* 119:1-16. PMID: 10804500

VALIDATION DATA

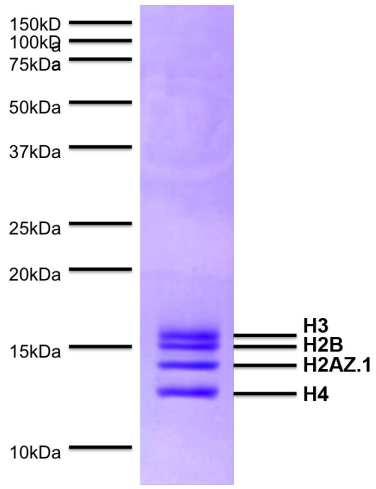

FIGURE 1 **Protein gel data.** Coomassie stained PAGE gel of proteins in Nucleosome (H2AZ.1), Human Recombinant Biotinylated (1 µg) demonstrates the purity of histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2AZ.1, H2B, H3, and H4) are indicated.

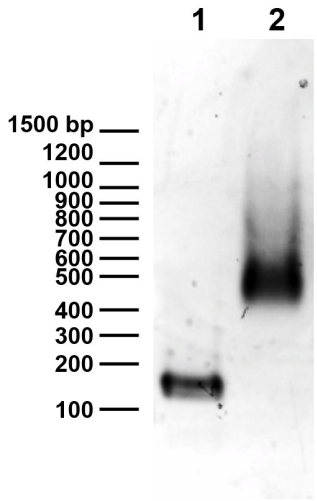

FIGURE 2 **DNA gel data.** Nucleosome (H2AZ.1), Human Recombinant Biotinylated run on an agarose gel and stained with ethidium bromide to visualize DNA.
Lane 1: DNA extracted from nucleosomes (100 ng). **Lane 2:** Intact nucleosomes (400 ng).

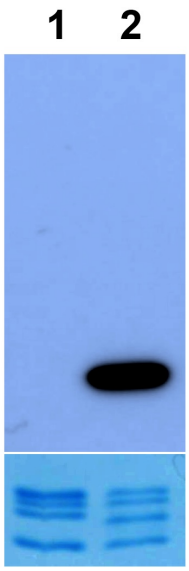

FIGURE 3 **Western blot data.** Western analysis of Nucleosome (H2AZ.1), Human Recombinant Biotinylated. **Top Panel:** Wild type (Lane 1) and H2AZ.1-containing nucleosomes (Lane 2) were probed with an anti-H2AZ antibody and analyzed via ECL readout. Only the H2AZ.1 samples produced a detectable signal. **Bottom Panel:** Detail from Coomassie stained gel showing histones from H2A (Lane 1) and H2AZ.1 nucleosomes (Lane 2).