Nucleosome Full Panel

Cat. No. NUC-065 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A 96-well plate containing 77 unique mononucleosomes assembled from recombinant human histones expressed in E. coli.
Source	E.coli
Description	A 96-well plate containing 77 unique mononucleosomes assembled from recombinant human histones expressed in E. coli (two each of histones H2A, H2B, H3 and H4; acc ession numbers: H2A-P04908, H2B-O60814, H3.1-P68431/H3.2-Q71DI3/H3.3-P8424 3, H4-P62805). Single and combinatorial histone post-translational modifications (PT Ms) are created using a proprietary synthetic method. The nucleosomes are wrapped by 147 or 187 base pairs DNA containing a central 601-positioning sequence (Lowary and Widom 1998 J Mol Biol. (1):19-42) with a 5' biotin-TEG group.
Form	Purified recombinant mononucleosomes individually stored in a 96 well plate (1.5 µg nucleosome at 1.5 µM per well) in 5 µL of nucleosome storage buffer (10 mM Tris-HCl pH 7.5, 1 mM EDTA, 25 mM NaCl, 2 mM DTT, & 20% glycerol).
Molecular Mass	~200,000 Da
Applications	The access to epigenetic diversity in a physiological nucleosome context enables broad end-user applications, including nucleosome binding studies (e.g. chromatin reader binding preferences, see application data below for example using BRD4 BD-1), enzyme screening assays (e.g. identification of preferred substrates), and antibody specificity testing (e.g. for applications that require antibody specificity in a

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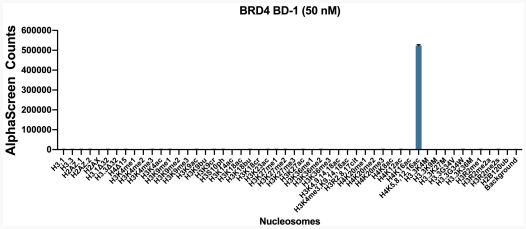
	nucleosome, rather than histone peptide context). The biotin group on the DNA facilitates pull-down experiments. Mononucleosomes do not contain free DNA which could alter assayed activities.
Storage	Stable for six months at -80°C from date of receipt.
Nucleosome Full Panel Application Data	 GST-tagged BRD4 Bromodomain 1 (50 nM) was assayed in AlphaScreen (Perkin Elmer) to measure binding to nucleosomes in the Nucleosome Panel (10 nM). BRD4 BD-1 showed strong, specific binding to tetra-acetylated histone H4 (H4K5/8/12/16ac), consistent with its reported binding preference.

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