

EpiCypher[®]

Bringing Epigenetics to Life

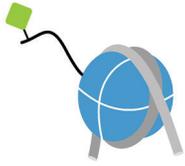
Functionalized
Recombinant Nucleosomes
For Drug Discovery and
Chromatin Research

Functionalized Nucleosome Substrates for Drug Discovery and Chromatin Research

Using nucleosome substrates in drug discovery assays is a dramatic improvement over peptides, unlocking access to challenging targets.

Features

Benefits



dNucS™ Designer Nucleosomes

- Contain physiological histone PTMs
- 601 Nucleosome positioning sequence (biotinylated or non-biotinylated)

- Suitable for enzyme assays and high-throughput screening
- Suitable for protein-protein interaction studies involving the modification of interest



rNucS™ Recombinant Nucleosomes

- Fully recombinant human histones
- 601 Nucleosome positioning sequence (biotinylated or non-biotinylated)

- Devoid of post-translational modifications
- Suitable for enzyme assays, inhibitor testing and high-throughput screening



oncoNucS™ Oncogenic Nucleosomes

- Contains specific mutations associated with cancer
- 601 Nucleosome positioning sequence (biotinylated or non-biotinylated)

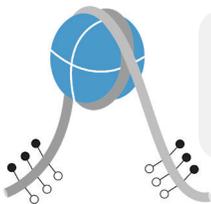
- Study effects of mutations on enzyme activity
- Suitable for high-throughput screening and inhibitor testing



vNucS™ Histone Variant Nucleosomes

- Includes one of several histone variants
- 601 Nucleosome positioning sequence (biotinylated or non-biotinylated)

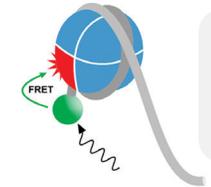
- Study effects of histone variants on enzyme activity
- Suitable for high-throughput screening and inhibitor testing



methyl DNA NucS

- Hemi-methylated 601 Nucleosome positioning sequence
- Methylated DNA can be assembled on modified octamers upon request

- Study effects of DNA methylation on enzyme activity
- Suitable for enzyme assays, inhibitor testing and high-throughput screening



EpiDyne® Chromatin Remodeling Assay Substrates

- Nucleosome positioning sequence engineered for remodeling assays
- Functionalized DNA or histones to enable HTS assay development

- Suitable for high-throughput screening and inhibitor testing
- Can be used for structural studies



SNAP-ChIP® Panels

- DNA-barcoded 601 Nucleosome positioning sequence
- Contain physiological histone PTMs

- Quantitative spike-in controls for ChIP
- Antibody specificity testing
- Monitor experimental variability



versaNuc™ Custom Nucleosome Development

- Low cost, versatile custom nucleosome synthesis service
- Choose from a variety of PTMs or nucleosomal DNA

- Make nucleosome panels with single or combinatorial PTMs
- Create unique combinations of modifications on histones or DNA templates specific to your research

dNucs: Designer Recombinant Nucleosomes With PTMs (Biotinylated)*



dNucs

Histone Lysine Methylation

H3K4me1	16-0321	20/50 µg
H3K4me2	16-0334	20/50 µg
H3K4me3	16-0316	20/50 µg
H3K9me1	16-0325	50 µg
H3K9me2	16-0324	20/50 µg
H3K9me3	16-0315	20/50 µg
H3K27me1	16-0338	50 µg
H3K27me2	16-0339	50 µg
H3K27me3	16-0317	20/50 µg
H3K36me1	16-0322	50 µg
H3K36me2	16-0319	20/50 µg
H3K36me3	16-0320	20/50 µg
H.3.3K36me3 <i>New!</i>	16-0390	50 µg
H3K79me1	16-0367	50 µg
H3K79me2	16-0368	50 µg
H3K79me3	16-0369	50 µg
H4K12me1	16-0393	50 µg
H4K20me1	16-0331	50 µg
H4K20me2	16-0332	50 µg
H4K20me3	16-0333	50 µg
H3K4me3,K9,14,18ac	16-0335	50 µg



dNucs Other PTMs

H2AUb*	16-0020	50 µg
H2AK119ub	16-0363	50 µg
H2BK120ub	16-0370	50 µg
H3K14ub1 <i>New!</i>	16-0391	50 µg
H3cit2,8,17	16-0362	50 µg
H3S10phos	16-0345	50 µg
H3.1S28phos <i>New!</i>	16-0388	50 µg
H3.3S31phos <i>New!</i>	16-0389	50 µg

* Enzymatically-modified; contains ubiquitination at H2AK13/15 and H2AK119.



dNucs

Histone Arginine Methylation

H2AR3me1	16-0359	50 µg
H2AR3me2a	16-0360	50 µg
H2AR3me2s	16-0361	50 µg
H3R2me1	16-0340	50 µg
H3R2me2a	16-0341	50 µg
H3R2me2s	16-0355	50 µg
H3R8me1	16-0379	50 µg
H3R8me2a	16-0380	50 µg
H3R8me2s	16-0381	50 µg
H3R17me1	16-0382	50 µg
H3R17me2a	16-0375	50 µg
H4R3me1	16-0356	50 µg
H4R3me2a	16-0357	50 µg
H4R3me2s	16-0358	50 µg



dNucs

Histone Acylation

H2AK5,9,13,15ac	16-0376	50 µg
H2BK12ac <i>New!</i>	16-0386	50 µg
H2BK20ac <i>New!</i>	16-0387	50 µg
H3K4ac	16-0342	50 µg
H3K9ac	16-0314	20/50 µg
H3K9bu	16-0371	50 µg
H3K9cr	16-0351	50 µg
H3K14ac	16-0343	50 µg
H3K18ac	16-0372	50 µg
H3K18bu	16-0373	50 µg
H3K18cr	16-0337	50 µg
H3K23ac	16-0364	50 µg
H3K27ac	16-0365	20/50 µg
H3K27ac,S28phos	16-0385	50 µg
H3K27bu	16-0384	50 µg
H3K27cr	16-0383	50 µg
H3K36ac	16-0378	50 µg
H4K20ac	16-0377	50 µg
H4K5ac	16-0352	50 µg
H4K8ac	16-0353	50 µg
H4K12ac	16-0312	50 µg
H4K16ac	16-0354	50 µg
H3K4,9,14,18ac	16-0336	50 µg
H3K4me3,K9,14,18ac	16-0335	50 µg
H3K4,9,14,18ac/H4K5,8,12,16ac	16-0374	50 µg
H4K5,8,12,16ac	16-0313	50 µg

Other Recombinant Nucleosomes



oncoNucs

AA Substitutions Implicated in Cancer

H3.3K4M, biotinylated	16-0349	50 µg
H3.3K9M, biotinylated	16-0350	50 µg
H3.3K27M, biotinylated	16-1323	50 µg
H3.3G34R, biotinylated	16-0346	50 µg
H3.3G34V, biotinylated	16-0347	50 µg
H3.3G34W, biotinylated	16-0348	50 µg
H3.3K36M, biotinylated	16-0344	50 µg



methyl DNA Nucs

Mononucleosomes, Hemi-methylated, Biotinylated	16-2003	50 µg
Mononucleosomes, Hemi-methylated	16-2103	50 µg
Mononucleosomes, 187x601 DNA, Biotinylated	16-2004	50 µg
Mononucleosomes, 187x601 DNA	16-2104	50 µg

Other Recombinant Nucleosomes

continued



vNucs

Histone Variants

H2AX, biotinylated	16-0013	50 µg
H2AXS139phos, biotinylated	16-0366	50 µg
H2AZ.1, biotinylated	16-0014	50 µg
H2AZ.2, biotinylated	16-0015	50 µg
H3.3, biotinylated	16-0011	50 µg
H3.3, non-biotinylated	16-0012	100 µg



rNucs

Human Recombinant, No PTMs

Mononucleosomes, biotinylated	16-0006	50 µg
Mononucleosomes, non-biotinylated	16-0009	100 µg
Mononucleosomes, desthiobiotinylated <i>New!</i>	16-0024	50 µg
Mononucleosomes, tailless, biotinylated <i>New!</i>	16-0027	50 µg

Recombinant Nucleosome Remodeling Substrates



EpiDyne®

Monitor Nucleosome Remodeling in vitro

EpiDyne® FRET Nucleosome Remodeling Assay Substrate	16-4201	50 µg
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EpiDyne®

New! Nucleosome Remodeling Assay Substrates (Biotinylated)*

ST601-GATC1	16-4111	50 µg
ST601-GATC1,2	16-4112	50 µg
ST601-GATC1,2,3	16-4113	50 µg
ST601-GATC1, 50-N-66	16-4114	50 µg
ST601-GATC1,2, 50-N-66	16-4115	50 µg
ST601-GATC1,2,3, 50-N-66	16-4116	50 µg

Custom nucleosome synthesis available.

Please email us at info@epicypher.com for additional information and pricing or complete a [Request for Quote](#) form on our website.

* Non-biotinylated versions of many products available. Please inquire.

EpiCypher makes recombinant modified nucleosomes affordable and accessible

versaNuc™ - a low cost custom nucleosome development solution

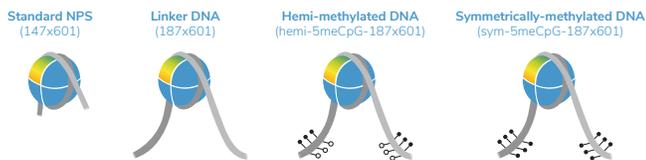
Access unprecedented epigenetic diversity without breaking your budget -- versaNucs start at only \$400.

Applications

- Create custom nucleosome panels carrying single or combinatorial modifications on histones or DNA
- Study effects of combinations of epigenetic marks and understudied PTMs on enzyme activity or chromatin binding
- Identify optimal nucleosome substrates for enzyme studies and inhibitor development.

Step 1: Pick Your Nucleosomal DNA

In-stock biotinylated DNAs shown. Inquire for custom DNAs.



Step 2: Choose your histone H3 PTMs

Completely customizable single & combinatorial PTMs from H3R2 up to H3K23!



- Lysine Methylation**
me1
me2
me3
- Lysine Acylation**
acetylation
propionylation
butyrylation
crotonylation
succinylation
etc...
- Arginine Methylation**
me1
me2a
me2s
- Others**
phosphorylation
citullination
mutations
truncations
etc...

Step 3: Design your panel



More info: epicypher.com/versanuc

dCypher® Nucleosome Panels

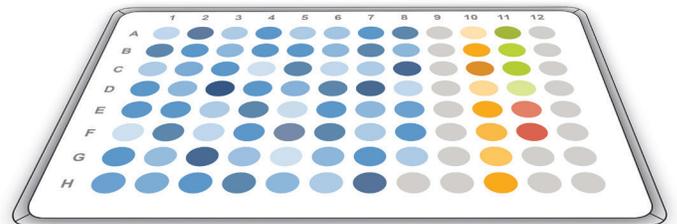
dCypher Nucleosome Panels provide an easy to use format to accelerate your research.

- Single and combinatorially-modified nucleosomes
- Nucleosome panels are provided in 96-well plate
- Full diversity or focused panel sets are available to fit your research needs

Applications

- Binding domain protein assays
- Enzyme activity assays
- Antibody specificity validation

Microtitre plate-based nucleosome panels for convenient access to over 75 unique nucleosomes



dCypher Nucleosome Panels Available

Panel	Catalog No.
Full Nucleosome Panel	16-9001
K-MetStat & OncoStat Panel	16-9002
R-MetStat Panel	16-9004
K-AcylStat Panel	16-9003

ORDERING INFO

Let's discuss your project
sales@epicypher.com

For more information
epicypher.com/nucleosomes

To place an order
sales@epicypher.com



SNAP-ChIP spike-in Panels
epicypher.com/snap-chip

Coming Soon
SNAP-ChIP R-MetStat panel

EpiCypher.com

855.374.2461

info@epicypher.com