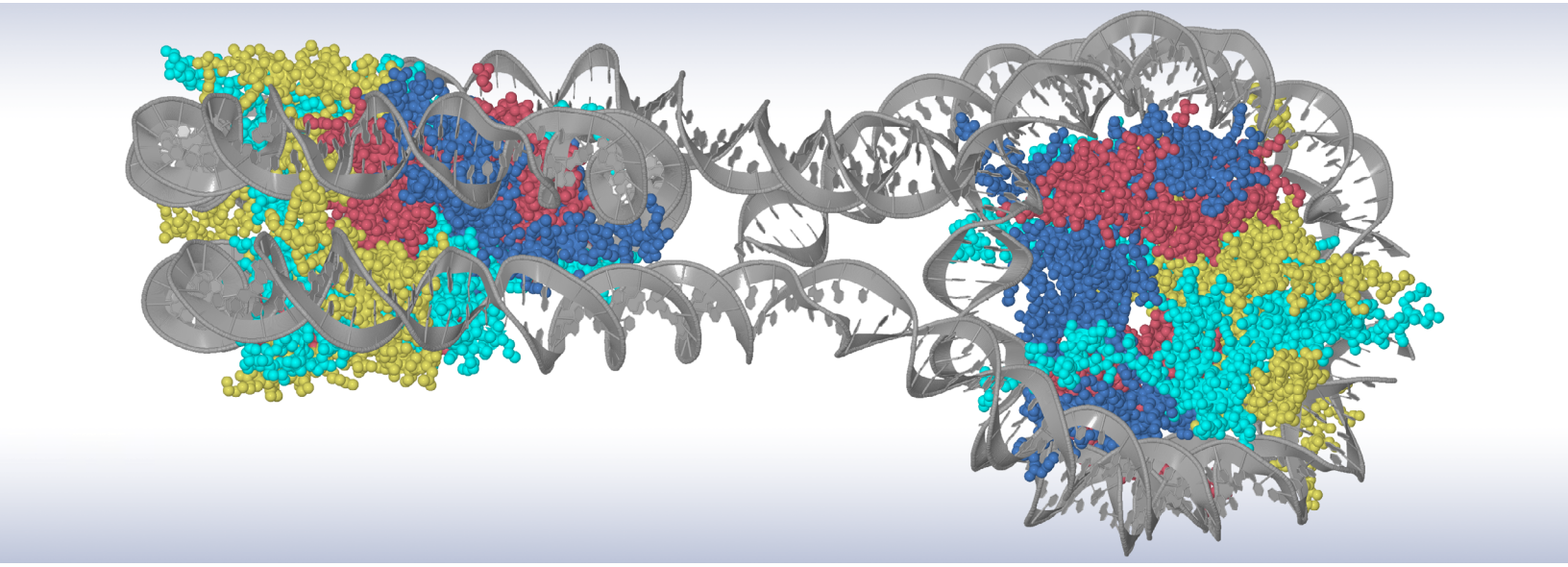
EpiCypher™

Pioneering the Science of Epigenetics™

Products for Epigenetics Drug Development Research



- Nucleosomes
- Proteins & Enzymes
- Histone Peptides
- Antibodies
- Histone Peptide Arrays
- Accessory Reagents

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Pioneering the Science of Epigenetics™

A pioneer in the field of epigenetics and chromatin biology, EpiCypher is a bioscience company developing transformative technologies and delivering superior products to researchers world-wide. Our technologies and products are making studies possible that were not imaginable just a few years ago.

Arising from an abundance of demand for high quality reagents from the laboratories of Mark Bedford, Brian Strahl, and Or Gozani, EpiCypher was founded in January of 2012 as a spin-out from University of North Carolina at Chapel Hill. EpiCypher has developed a wide portfolio of best in class products and our innovation is a direct result of the scientific power associated with our researchers and collaborators.

EpiCypher is transforming human health as the leader in epigenetics and chromatin biology research products. The company serves customers in a broad range of markets, enabling the adoption of epigenetic solutions in research and drug development. Bringing significant know-how and a commitment to innovation, collaboration and quality, we work with you to solve your research challenges and develop the most efficient path forward for your project – helping to create value on the road to improving human health.

SCIENTIFIC FOUNDERS

Mark Bedford, Ph.D. Dr. Bedford is a Professor in the Department of Molecular Carcinogenesis at the University of Texas MD Anderson Cancer Center. He received a Ph.D. from the Weizmann Institute of Science in Israel, and performed his postdoctoral studies with Dr. Philip Leder at Harvard Medical School. Dr. Bedford's scientific body of work has focused on establishing the biological roles of arginine methylation. He is also widely recognized for his development of protein domain microarrays that are used to identify the binders of a variety of epigenetic marks.

Or Gozani, M.D., Ph.D. Dr. Gozani is a Professor at Stanford University. Dr. Gozani received his B.A. at U.C. Berkeley and his MD and Ph.D. degrees from Harvard Medical School. Dr. Gozani also did his post-doctoral training at Harvard Medical School in the lab of Dr. Junying Yuan. Dr. Gozani's lab focuses on understanding how chromatin-signaling networks regulate key physiologic and pathologic programs. For his work in chromatin biology and epigenetics, Dr. Gozani has received numerous honors including a Burroughs Wellcome Career Award in Biomedical Sciences, a Kimmel Scholar Award, a Searle Scholar Award, and an Ellison Senior Scholar in Aging Award.

Brian Strahl, Ph.D. Dr. Strahl is a Professor in the Department of Biochemistry & Biophysics at the University of North Carolina at Chapel Hill, where he has been an investigator for the past 10 years. Dr. Strahl performed his post-doctoral studies with Dr. C. David Allis at the University of Virginia, where he formally proposed the histone code hypothesis – a far-reaching idea to explain the function of histone modifications. Dr. Strahl has been the recipient of various prestigious awards for his work on histone modifications. He was the recipient of a Presidential Early Career Award for Scientists and Engineers in 2003. Dr. Strahl also received the ASBMB-Schering-Plough Research Institute Award in 2005, and the EUREKA award from the NIH in 2007.

PURIFIED AND RECOMBINANT NUCLEOSOMES

EpiCypher offers a portfolio of superior nucleosome reagents for protein binding and enzyme screening assays, including our flagship product: fully recombinant human mononucleosomes assembled on biotinylated 601 sequence DNA. Advantages of these reagents include …

- Unparalleled purity relative to competitor's products
- Biotinylation facilitates immobilization to solid supports in plate or bead format, and allows assay readout via streptavidin-based detection
- No contaminating free DNA or free histones, providing a physiological substrate with no interfering components
- Full length, untagged human histones allow the protein tails to be fully available for enzymatic reactions or protein binding. Also, all popular epitope tags are available for interaction studies or assay readout
- The core of a growing list of fully recombinant designer nucleosomes with homogeneous site-specific modifications

The EpiAdvantage

Results you can count on

EpiCypher has stringent quality control standards ensuring negligible lot-to-lot variation.

Significant reduction of false positives/negatives

Superior purity (>98%) affords a focus on optimizing libraries and reaching positive hits on a more consistent basis.

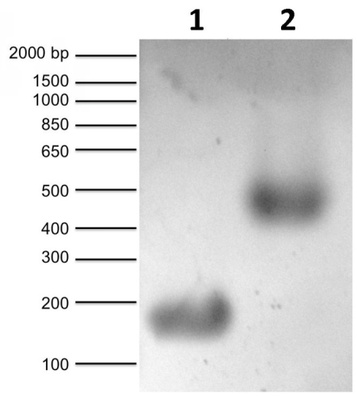
EpiCypher costs the same or less

On a per data point basis, a vital metric to drug developers. The high purity of the product reduces the quantity of material required.

Physiologically relevant substrates

EpiCypher offers human recombinant nucleosomes, the most appropriate substrate for drug development research.

EpiCypher is now producing **fully recombinant human mononucleosomes** incorporating a variety of specific post-translational modifications, **designer nucleosomes** (dNucs). The first products are scheduled for release over the coming months, with new modified versions to be continuously added as we expand this exciting product line. dNucs open the possibility of high content studies and experimental access to new families of epigenetic regulators, and are available only from EpiCypher.



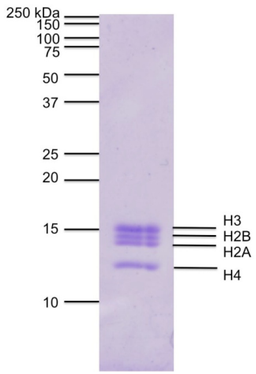
DNA Gel Data

Mononucleosomes, Recombinant Human 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).

Note the absence of free DNA in the nucleosome lane.



Protein Gel Data

Mononucleosomes, Recombinant Human Biotinylated (2 µg) run on a Coomassie-stained PAGE gel demonstrates the purity of the histones in the preparation. Sizes of molecular weight markers and positions of the core histones (H2A, H2B, H3 and H4) are indicated.

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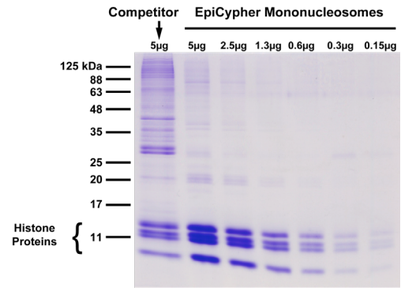


HeLa Nucleosome Protein Gel Data

Coomassie-stained PAGE gel containing protein extracted from 5 µg of a competitor's nucleosomes run alongside EpiCypher's HeLa Mononucleosomes in serial dilution. Competitor's nucleosomes contain mostly contaminating non-histone chromatin proteins. In EpiCypher's nucleosomes, the histones are the predominant species. It is clear that there are numerous sources of potential interference in the competitor's nucleosomes. Additionally, what the competitor calls 5 µg appears to fall between to 0.6 and 1.3 µg of EpiCypher nucleosomes, based on relative staining of the histone proteins.

Description	Pack Size	Catalog No.
HISTONE OCTAMER, RECOMBINANT HUMAN	50 µg	16-0001
Human histone octamers (two each of histones H2A, H2B, H3 and H4) assembled from recombinant proteins expressed in *E. coli*. The histone octamer is the protein component of the nucleosome.		
HELA MONONUCLEOSOMES, PURIFIED	50 µg	16-0002
From HeLa cells (>95% purity), consisting of the histone octamer wrapped by ~ 147 base pairs of DNA.		
HELA POLYNUCLEOSOMES, PURIFIED	50 µg	16-0003
From HeLa cells (>95% purity), consisting of the histone octamer (average range 2 – 6) wrapped by DNA.		
CHICKEN POLYNUCLEOSOMES	50 µg	16-0004
From chicken erythrocytes. Predominantly hexamers, septamers and octamers, and includes linker histones (*e.g.* H1). Purity >95%.		
MONONUCLEOSOMES, HUMAN RECOMBINANT BIOTINYLATED	25 µg	16-0006
Assembled from recombinant human histones expressed in *E. coli.* A 5' biotin group on the DNA makes them ideal for use in nucleosome interaction and enzyme screening assays. Purity >98%		
NUCLEOSOME ASSEMBLY 601 DNA	50 µg	18-0005
A 147 base-pair double-stranded DNA fragment (aka. the 'Widom sequence') with a strong positioning ability for histone octamers. There is a biotin group on the 5' end of the DNA fragment.		

Customer Testimonial

EpiCypher has been tremendously helpful in my research in epigenetics. The quality of nucleosomes that I have obtained from your company has been amazing and consistent, which has translated to reproducibility in my assays. I have tried many other vendors and have found that EpiCypher to be the best source of nucleosomes and the customer service has been really great as well. I would definitely recommend the company to any of my colleagues looking for epigenetics reagents.

Sixun Chen
Stuart L. Schreiber Research Laboratory
Broad Institute

RECOMBINANT PROTEINS AND ENZYMES

Histone modifying enzymes and histone binding proteins are important regulators of genome function and targets for drug development due to their roles in diseases such as cancer. EpiCypher offers the highest quality reagents for your research into these proteins.

The regulation of chromosome and chromatin structure and function involves a variety of non-histone proteins that interact with chromatin and chromatin modifications. Many of these proteins include one or more of a variety of protein sequence motifs that confer specific functions regulating protein-protein interactions, the so-called “effector” or “reader” proteins. These reader domain motifs, include the bromodomain, chromodomain, MBD (Methylated-DNA Binding Domain), MBT (Malignant Brain Tumor), PHD (Plant Homeodomain), PWWP and Tudor domains.

BROMODOMAIN PROTEINS

Bromodomain proteins recognize acetylated lysine residues on histone and non-histone target proteins and are key mediators of signal transduction. The recognition of acetylated histones by bromodomain-containing ‘effector’ proteins allows the recruitment of associated complexes to regions of acetylated chromatin. Histone acetylation is often correlated with higher levels of transcription, so many bromodomain proteins are involved in transcriptional activation and the opening of chromatin structure. Recombinant bromodomains are useful for substrate dissection and inhibitor studies.

Description	Pack Size	Catalog No.
ACF1 / BAZ1A BROMODOMAIN, GST-TAGGED	100 µg	15-0001
BATZFD BROMODOMAIN, GST-TAGGED	100 µg	15-0004
BAZ2B BROMODOMAIN, GST-TAGGED	100 µg	15-0042
BPTF BROMODOMAIN, GST-TAGGED	100 µg	15-0007
BRD2 BROMODOMAIN 1, GST-TAGGED	100 µg	15-0009
BRD2 BROMODOMAIN 2, GST-TAGGED	100 µg	15-0010
BRD3 BROMODOMAIN 1, GST-TAGGED	100 µg	15-0011
BRD4 BROMODOMAIN 1, GST-TAGGED	100 µg	15-0012
BRD4 BROMODOMAIN 1, HIS-TAGGED	100 µg	15-0049
BRD4 BROMODOMAIN 2, GST-TAGGED	100 µg	15-0013
BRD4 BROMODOMAIN 2, HIS-TAGGED	100 µg	15-0047
BRDT BROMODOMAIN 2, GST-TAGGED	100 µg	15-0017
BRG1 / SMCA4 BROMODOMAIN, GST-TAGGED	100 µg	15-0018
CBP BROMODOMAIN, GST-TAGGED	100 µg	15-0023
CBP BROMODOMAIN, HIS-TAGGED	100 µg	15-0048
CECR2 BROMODOMAIN, GST-TAGGED	100 µg	15-0024
GCN5 BROMODOMAIN, GST-TAGGED	100 µg	15-0026
P300 BROMODOMAIN, GST-TAGGED	100 µg	15-0037
P300 BROMODOMAIN, HIS-TAGGED	100 µg	15-0046
PB1 BROMODOMAIN 1, GST-TAGGED	100 µg	15-0027

MBT DOMAIN PROTEINS

Description	Pack Size	Catalog No.
L3MBTL1 3XMBT DOMAIN, RECOMBINANT HUMAN	100 µg	15-0043

YEATS DOMAIN PROTEINS

Description	Pack Size	Catalog No.
AF9, RECOMBINANT HUMAN	100 µg	15-0045

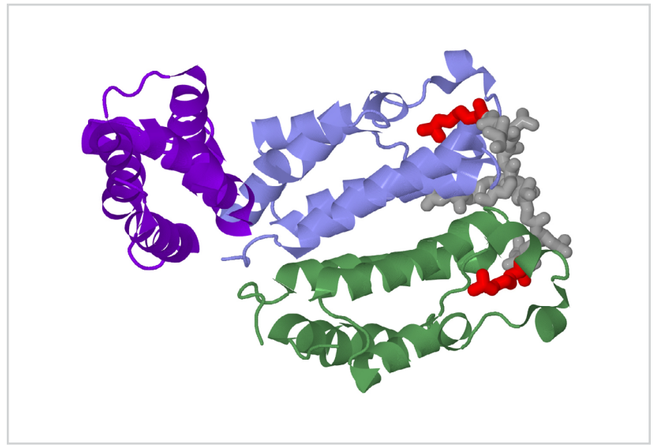
HISTONE MODIFYING ENZYMES

Recombinant histone modifying enzymes for substrate screening and kinetic studies

Description	Pack Size	Catalog No.
DOT1L CATALYTIC DOMAIN, RECOMBINANT HUMAN	50 µg	15-1001
G9A, RECOMBINANT HUMAN	50 µg	15-1008
NSD2 / MMSET CATALYTIC DOMAIN, RECOMBINANT HUMAN	50 µg	15-1002
SETD6, RECOMBINANT HUMAN	50 µg	15-1004
SMYD2, RECOMBINANT HUMAN	25 µg	15-1006
SMYD3, RECOMBINANT HUMAN	25 µg	15-1007

HISTONE PROTEINS

Description	Pack Size	Catalog No.
HISTONE H2A, RECOMBINANT HUMAN	100 µg	15-0301
HISTONE H2B, RECOMBINANT HUMAN	100 µg	15-0302
HISTONE H3.1, RECOMBINANT HUMAN	100 µg	15-0303
HISTONE H4, RECOMBINANT HUMAN	100 µg	15-0304



Crystal structure of Bromodomain 1 from human BRD2 bound to a peptide derived from the amino terminus of histone H4 (residues 2-16) acetylated at lysine 8 and lysine 12 (PDB ID: 2DVQ). The histone peptide backbone appears in grey, with the acetyllysine residues in red.

HISTONE PEPTIDES

EpiCypher offers an extensive selection of biotinylated histone peptides for use in variety of interaction studies or enzymatic assays. The currently available peptides represent over 95 modifications on all four core histones (H2A, H2B, H3, H4) and several histone variants (including H2AX and H3.3).

EpiCypher histone peptides are:

- Highly purified and guaranteed to be full-length
- Represent over 95 modifications
- Includes single or combinatorial modifications (up to six per peptide)
- Validated by MS for identity and HPLC for purity
- Used for the study of proteins that interact with histones and histone modifications
- Ideal for use as substrates in enzymatic assays

HISTONE H2AX PEPTIDES, BIOTINYLATED

Description	Pack Size	Catalog No.
HISTONE H2AX C-TERMINAL PEPTIDE	50 µg	12-0039
HISTONE H2AX S139Ph PEPTIDE	50 µg	12-0040

HISTONE H3 PEPTIDES, BIOTINYLATED

Description	Pack Size	Catalog No.
HISTONE H3 N-TERMINAL PEPTIDE	50 µg	12-0001
HISTONE H3 K4Ac PEPTIDE	50 µg	12-0002
HISTONE H3 K4,9,14,18Ac PEPTIDE	50 µg	12-0006
HISTONE H3 K4Me1 PEPTIDE	50 µg	12-0007
HISTONE H3 K4Me2 PEPTIDE	50 µg	12-0008
HISTONE H3 K4Me3 PEPTIDE	50 µg	12-0009
HISTONE H3 K4Me3 K9Ac PEPTIDE	50 µg	12-0048
HISTONE H3 K9Ac PEPTIDE	50 µg	12-0003
HISTONE H3 K9Me1 PEPTIDE	50 µg	12-0010
HISTONE H3 K9Me2 PEPTIDE	50 µg	12-0011
HISTONE H3 K9Me3 PEPTIDE	50 µg	12-0012
HISTONE H3 S10Ph PEPTIDE	50 µg	12-0041
HISTONE H3 K14Ac PEPTIDE	50 µg	12-0004
HISTONE H3 K18Ac PEPTIDE	50 µg	12-0005
HISTONE H3 K18Me1 PEPTIDE	50 µg	12-0013
HISTONE H3 K18Me2 PEPTIDE	50 µg	12-0014
HISTONE H3 K18Me3 PEPTIDE	50 µg	12-0015
HISTONE H3 aa15-34 PEPTIDE	50 µg	12-0016
HISTONE H3 K27Ac PEPTIDE	50 µg	12-0042
HISTONE H3 K27Ac S28Ph PEPTIDE	50 µg	12-0049
HISTONE H3 K27Me1 PEPTIDE	50 µg	12-0017

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Description	Pack Size	Catalog No.
HISTONE H3 K27Me2 PEPTIDE	50 µg	12-0018
HISTONE H3 K27Me3 PEPTIDE	50 µg	12-0019
HISTONE H3 aa27-45 PEPTIDE	50 µg	12-0020
HISTONE H3 K36Ac PEPTIDE	50 µg	12-0021
HISTONE H3 K36Me1 PEPTIDE	50 µg	12-0022
HISTONE H3 K36Me2 PEPTIDE	50 µg	12-0023
HISTONE H3 K36Me3 PEPTIDE	50 µg	12-0024
HISTONE H3 aa74-84 PEPTIDE	50 µg	12-0025
HISTONE H3 K79Me1 PEPTIDE	50 µg	12-0026
HISTONE H3 K79Me2 PEPTIDE	50 µg	12-0027
HISTONE H3 K79Me3 PEPTIDE	50 µg	12-0028

HISTONE H4 PEPTIDES, BIOTINYLATED

Description	Pack Size	Catalog No.
HISTONE H4 N-TERMINAL PEPTIDE	50 µg	12-0029
HISTONE H4 R3Me2a PEPTIDE	50 µg	12-0058
HISTONE H4 R3Me2s PEPTIDE	50 µg	12-0059
HISTONE H4 K5Ac PEPTIDE	50 µg	12-0030
HISTONE H4 K8Ac PEPTIDE	50 µg	12-0031
HISTONE H4 K12Ac PEPTIDE	50 µg	12-0032
HISTONE H4 K16Ac PEPTIDE	50 µg	12-0033
HISTONE H4 K5Ac, K12Ac PEPTIDE	50 µg	12-0045
HISTONE H4 K5Ac, K8Ac, K12Ac PEPTIDE	50 µg	12-0047
HISTONE H4 K8Ac, K16Ac PEPTIDE	50 µg	12-0046
HISTONE H4 K5,8,12,16Ac PEPTIDE	50 µg	12-0034
HISTONE H4 K5,8,12,16Ac PEPTIDE (No α-Ac)	50 µg	12-0057
HISTONE H4 K5,8,12,16Ac PEPTIDE (NON-BIOTINYLATED)	50 µg	12-9034
HISTONE H4 K12Ac, K16Ac, K20Me2 PEPTIDE	50 µg	12-0051
HISTONE H4 K12Ac, K16Ac, K20Me3 PEPTIDE	50 µg	12-0050
HISTONE H4 aa11-27 PEPTIDE	50 µg	12-0035
HISTONE H4 K20Ac PEPTIDE	50 µg	12-0052
HISTONE H4 K20Me1 PEPTIDE	50 µg	12-0036
HISTONE H4 K20Me2 PEPTIDE	50 µg	12-0037
HISTONE H4 K20Me3 PEPTIDE	50 µg	12-0038

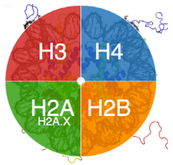
If you dont see the peptide you are looking for, please visit www.epicypher.com/peptides

Customer Testimonial

I recently worked with EpiCypher and their modified histone peptides to help us address a reviewer's comments on a manuscript submission. My experience with their service, products and technical support was outstanding! The peptides were shipped in a timely manner; they were cost-effective and easy to use. The availability of matched sets of peptides that range from unmodified through multivalent modifications allowed for the direct assessment of selectivity and specificity without the added cost of multiple syntheses. The experiment worked flawlessly, thus allowing us to resubmit with a quick turnaround. I look forward to continuing my relationship with EpiCypher and their superior products.

Paula Vertino, Ph.D.
Professor, Department of Radiation Oncology, Emory University School of Medicine
Leader, Cancer Genetics and Epigenetics Program
Winship Cancer Institute of Emory University

ANTIBODIES FOR EPIGENETICS AND CHROMATIN BIOLOGY RESEARCH



EpiCypher manufactures and sells highly validated antibodies for epigenetics and chromatin research. EpiCypher's histone and histone modification antibodies are all validated for use in chromatin IP. Using our industry-leading EpiTitan™ Histone Peptide array, EpiCypher performs rigorous testing to confirm that our antibodies recognize only the designated modification and to ensure that there is no cross-reactivity to other sites or modification states.

An Interactive Database for the Assessment of Histone Antibody Specificity ***www.histoneantibodies.com***
Rothbart *et al*, (2015) Molecular Cell ***www.sciencedirect.com/science/article/pii/S1097276515004943***

ARGININE METHYLATION ANTIBODIES

Arginine methylation is a post-translational protein modification involved in the regulation of diverse cellular processes such as transcription, RNA metabolism and DNA damage repair. Arginine methylation exists in three forms (monomethyl, asymmetric dimethyl and symmetric dimethyl), and is catalyzed by nine protein-arginine methyltransferase (PRMT) enzymes in humans. Perturbations in methylarginine levels and methylarginine effector protein function have been linked to diverse human disorders, including cancer, neurodegeneration and cardiovascular disease.

Description	Applications	Pack Size	Catalog No.
ASYMMETRIC DIMETHYL-ARGININE (ADMA) ASYM26	WB	100 µl	13-0011
SYMMETRIC DIMETHYL-ARGININE (SDMA) SYM10	WB	100 µl	13-0012
CARM1 / PRMT4	WB	100 µl	13-0006
HISTONE H3 R8Me1	ChIP, IF, IHC, WB	100 µg	13-0017
HISTONE H3 R8Me2a	IF, IHC, IP, WB	100 µg	13-0018
HISTONE H3 R8Me2s	IF, IHC, IP, WB	100 µg	13-0019
HISTONE H3 R17Me2a	IF, IHC, IP, WB	100 µg	13-0016
PRMT1	WB	100 µl	13-0007
PRMT5 / JBP1	WB, IP	100 µl	13-0008
PRMT7	WB	100 µl	13-0019

HISTONE AND HISTONE MODIFICATION ANTIBODIES

Histone post-translational modifications (PTMs) are important regulators of chromatin structure and function. Some of the more widely studied include acetylation, arginine methylation, lysine methylation phosphorylation, SUMOylation and ubiquitylation. Specific histone PTMs can recruit modification binding 'effector' proteins or complexes via their 'reader' domains, conferring a unique function or identity to regions of the genome enriched for the modified histone. ChIP-validated antibodies that recognize individual PTMs in a defined context are essential tools to study the role of specific modifications in cellular function and disease.

Description	Applications	Pack Size	Catalog No.
HISTONE H3 C-TERMINAL	ChIP, WB	100 µl	13-0001
HISTONE H3 K4Me2	ChIP, ChIP-seq, IF, WB	100 µg	13-0013
HISTONE H3 K4Me3	ChIP, ChIP-seq, IF, WB	100 µl	13-0004
HISTONE H3 R8Me1	IF, IHC WB	100 µg	13-0017
HISTONE H3 R8Me2a	IF, IHC, IP, WB	100 µg	13-0018
HISTONE H3 R8Me2s	IF, IHC, IP, WB	100 µg	13-0019
HISTONE H3 K9Ac	CHIP, IF, IHC, IP, WB	100 µg	13-0020
HISTONE H3 K9Me1	ChIP, ChIP-seq, IF, WB	100 µg	13-0014
HISTONE H3 R17Me2a	IF, IHC, IP, WB	100 µg	13-0016
HISTONE H3 K27Me1	IF, WB	100 µg	13-0015
HISTONE H4 K8Ac	CHIP, IF, IHC, IP, WB	100 µg	13-0021

HISTONE MODIFYING ENZYME ANTIBODIES

The post-translational modification of histone proteins is catalyzed by proteins that reversibly deposit or remove small chemical tags on specific residues on the histone proteins. Histone modifying enzymes include (but are not limited to) kinases and phosphatases (phosphorylation); acetyltransferases and, deacetylases (acetylation); methyltransferases and demethylases (methylation) and ubiquitin conjugating or de-conjugating enzymes. Given the involvement of aberrant or misregulated histone modifications in a range of disease, many of these enzymes are targets for therapeutic intervention.

Description	Applications	Pack Size	Catalog No.
CARM1 / PRMT4	WB	100 µl	13-0006
NSD2 / MMSET	ChIP, IF, WB	100 µg	13-0002
PRMT1	WB	100 µl	13-0007
PRMT5 / JBP1	IP, WB	100 µl	13-0008
PRMT7	WB	100 µl	13-0009

LYSINE METHYLATION ANTIBODIES

Lysine methylation is an important post-translational modification present on both histone and non-histone proteins, and is involved in the regulation of transcription, the DNA damage response and other important cellular pathways. Lysine methylation is catalyzed by the SET-domain and PR-domain family of lysine methyltransferase enzymes (KMTs), and removed by lysine demethylases (KDMs). The mis-regulation of lysine methylation is central to the development of a variety of cancers.

Description	Applications	Pack Size	Catalog No.
HISTONE H3 K4Me2	ChIP, ChIP-seq, IF, WB	100 µg	13-0013
HISTONE H3 K4Me3	ChIP, ChIP-seq, IF, WB	100 µg	13-0004
HISTONE H3 K9Me1	ChIP, ChIP-seq, IF, WB	100 µg	13-0014
HISTONE H3 K27Me1	IF, WB	100 µg	13-0015
NSD2 / MMSET	ChIP, IP, WB	100 µg	13-0002
SETD6	IF, IP, WB	100 µg	13-0003

Applications Key: ChIP - Chromatin IP; **E** - ELISA; **FACS** - Flow cytometry; **IF** - Immunofluorescence
IHC - Immunohistochemistry; **IP** - Immunoprecipitation; **WB** - Western Blotting

HISTONE PEPTIDE ARRAYS

EPICYPHER HISTONE PEPTIDE ARRAYS: EPITITAN™

EpiCypher is the industry leader in histone peptide arrays, with the most versatile and highest quality products available. **EpiTitan™** represents our drive to continuously improve our products and offer the best array possible.

EPITITAN™ HISTONE PEPTIDE ARRAY IMPROVEMENTS

- Capability to perform two independent experiments per array with the new multi-well gasket format
- Additional peptides and more unique modifications
- Improved positive controls for epitope tags and primary antibodies
- Enhanced scanning and analysis tools

THE EPICYPHER ADVANTAGE

Our QC is unparalleled. Each peptide is individually synthesized and extensively analyzed prior to array spotting, so you can trust the results of your assays. This is dramatically superior to the *in situ* SPOT synthesis approach, as used by other companies to produce their arrays.

EPITITAN™ Catalog No. 11-2001

Description:

EpiCypher's EpiTitan™ Histone Peptide Array platform is designed for rapid and high-throughput screening of reader protein, antibody and enzyme interactions with a comprehensive library of combinatorially-modified and biotinylated histone peptides immobilized on a streptavidin-coated glass slide. The peptides are purified and validated by mass spec prior to spotting and include over **95 unique modifications** on the four core histones (H2A, H2B, H3 and H4) and several histone variants. Every EpiTitan™ Histone Peptide Array contains more than 275 histone peptides spotted 12 times each for high quality detection and analysis of antibody or protein binding or enzyme activity.

MULTI-WELL ARRAY GASKET Catalog No. 11-3001

The multi-well gasket includes the ability to perform two experiments per array. The gasket facilitates the independent interrogation of each sub-array while including a built-in cover with small ports to facilitate reagent addition and removal.

- Test different proteins or antibodies
- Examine multiple dilutions of the same antibody
- Include positive controls with your experiment

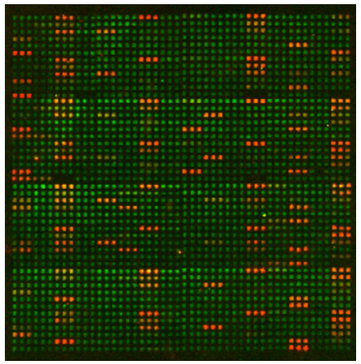


Figure Legend: Detection of histone modification binding of Histone H3 K4Me3 Antibody (Catalog No. 13-0004) using the EpiTitan™ Histone Peptide Array, scanned at 25 µM resolution with Typhoon 9400 scanner (GE). The peptide spotting tracer appears green, and the H3 K4Me3 Antibody protein is shown in red. Authentic binding events appear as three adjacent red dots, indicating that the antibody has bound all three of the same peptide in the set.

An Interactive Database for the Assessment of Histone Antibody Specificity ***www.histoneantibodies.com***
Rothbart *et al*, (2015) Molecular Cell ***www.sciencedirect.com/science/article/pii/S1097276515004943***

ACCESSORY REAGENTS

HISTONE EXPRESSION VECTORS

Histone H3.3 Expression Vectors can be used for the expression of DDDDK-tagged human histone H3.3 in mammalian cell culture cells.

Description	Pack Size	Catalog No.
HISTONE H3.3 EXPRESSION VECTOR pEPI-H3.3WT	50 µg	18-0002
HISTONE H3.3 EXPRESSION VECTOR pEPI-H3.3K9M	50 µg	18-0003
HISTONE H3.3 EXPRESSION VECTOR pEPI-H3.3K27M	50 µg	18-0004

CELL EXTRACTS

HeLa cells are an immortalized human cell line derived from a cervical cancer biopsy. HeLa nuclear extract is an excellent source of transcription factors, histones, chromatin proteins and enzymatic activity (*e.g.* HDAC) and can be used in a wide variety of experiments, including transcription factor studies, gel shift assays, enzymatic assays and as a control for Western blotting.

Description	Pack Size	Catalog No.
HELA NUCLEAR EXTRACT	250 µg	17-0001

EPIGENETICS SERVICES

EpiCypher offers a variety of services to assist you in your epigenetics and chromatin biology research, including histone peptide array screening, peptide pull-down, fluorescence polarization to analyze protein interactions and peptide synthesis. Please contact info@epicypher.com for additional information.

Customer Testimonial

I recently worked with EpiCypher on the characterization of the binding specificity of a histone-binding domain. I was very impressed with not only the excellent communication and technical expertise, but also the rate at which they develop and incorporate new products in the lineup - the peptides we were interested in testing weren't available just a few months ago, but now they are included on the new generation peptide arrays. The results were very informative and I definitely look forward to working with EpiCypher.

Xiaoyu Zhang
Department of Plant Biology
University of Georgia

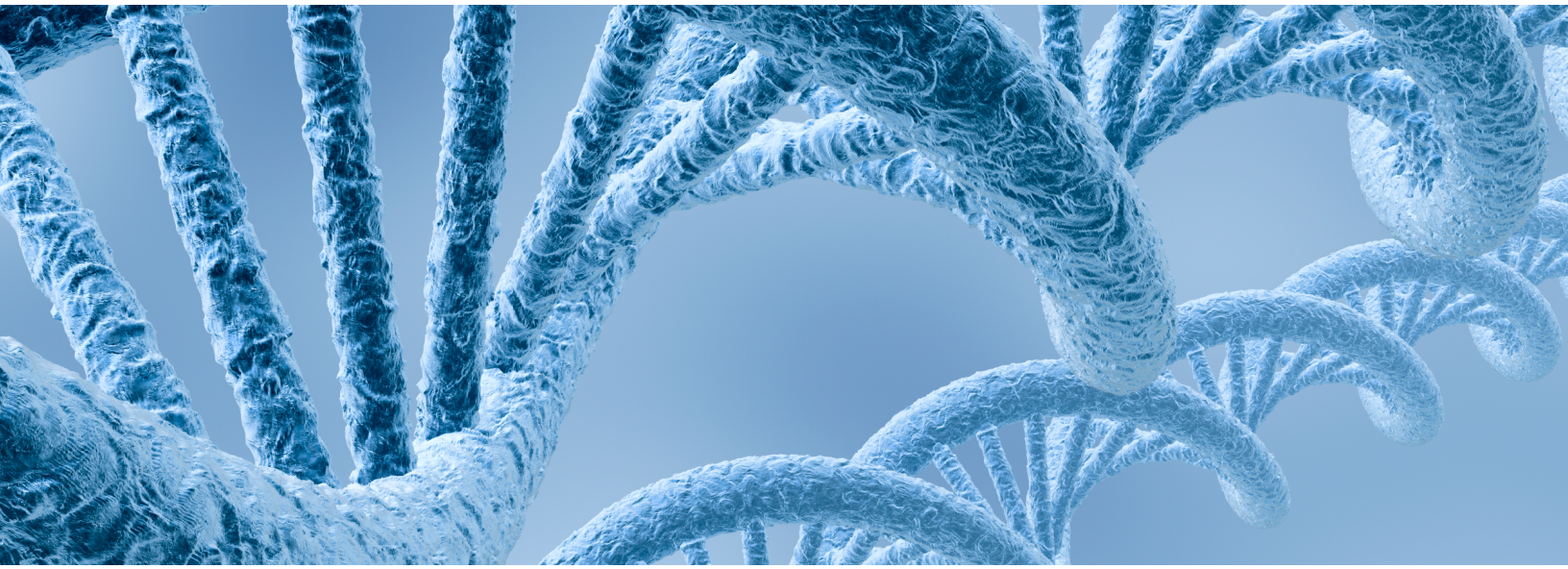
EpiCypher™
Pioneering the Science of Epigenetics™

To Place an Order or Receive Technical Assistance

In the U.S. and Canada, call toll-free 855-374-2461

For other countries across the world, please visit: *www.epicypher.com/global-distributors*

To learn how EpiCypher is pioneering the science of epigenetics visit *www.epicypher.com*



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