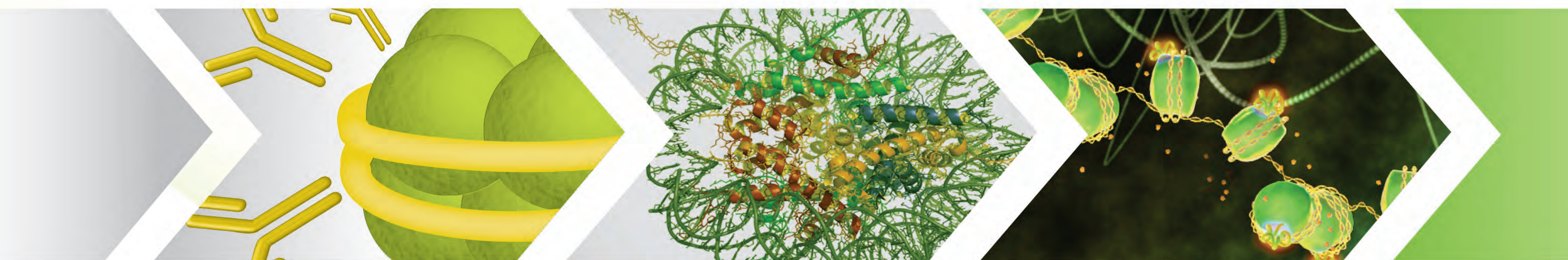


Complete Solutions for

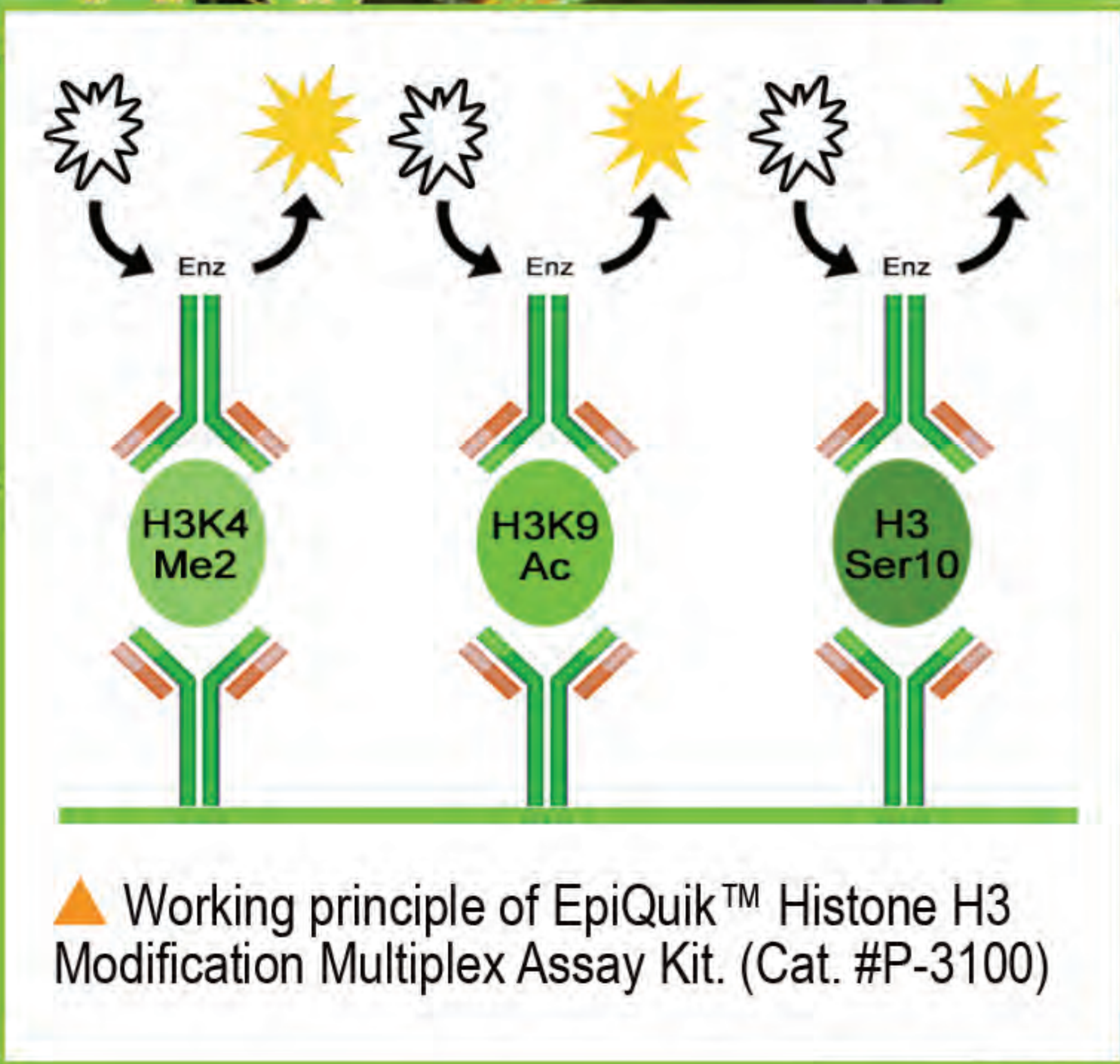
Histone Modification



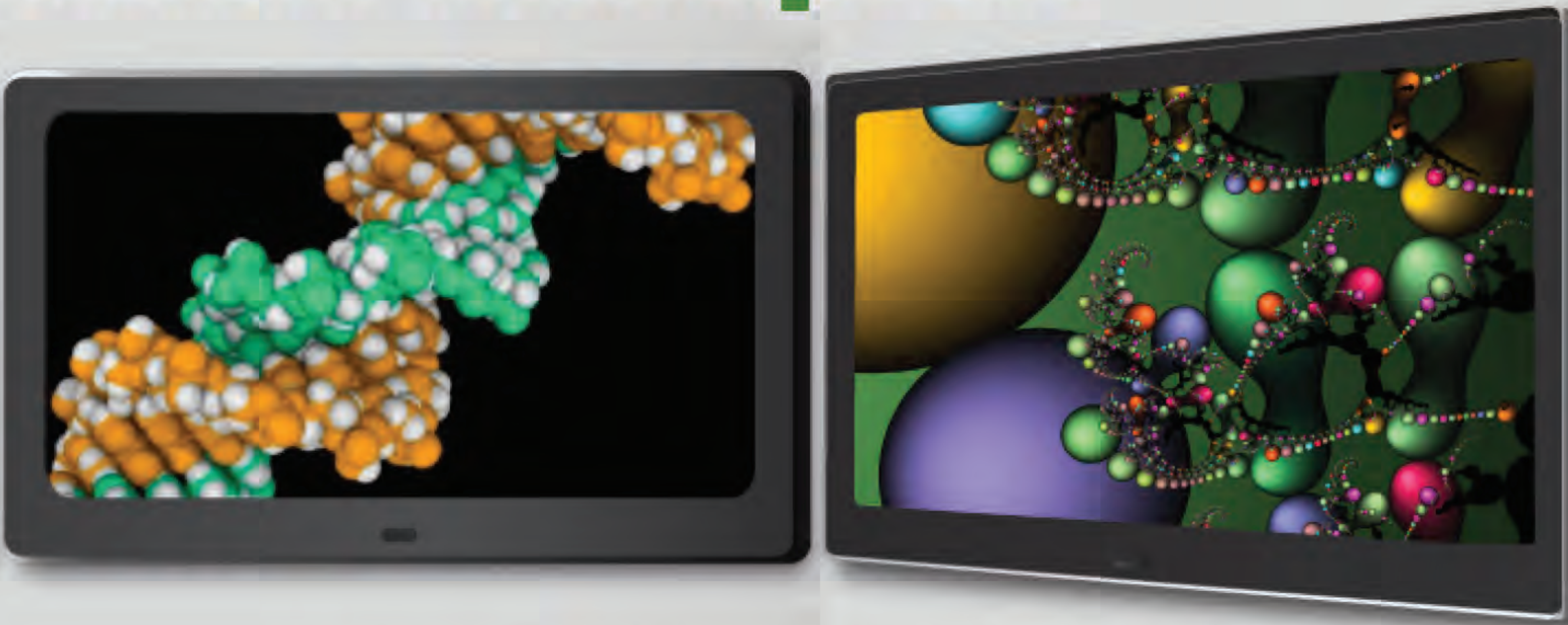
Histone Methylation
Histone Demethylation
Histone Acetylation
Histone Deacetylation
Histone Phosphorylation
Histone Sumoylation
Histone Protein Isolation



Histone Methylation Multiplex



▲ Working principle of EpiQuik™ Histone H3 Modification Multiplex Assay Kit. (Cat. #P-3100)



Screen and measure up to 21 different histone **H3 or 10 different histone **H4** modification patterns in a single ELISA-like kit**

www.epigentek.com/histone-modifications

Histone H3 & H4 Multiplex Assays

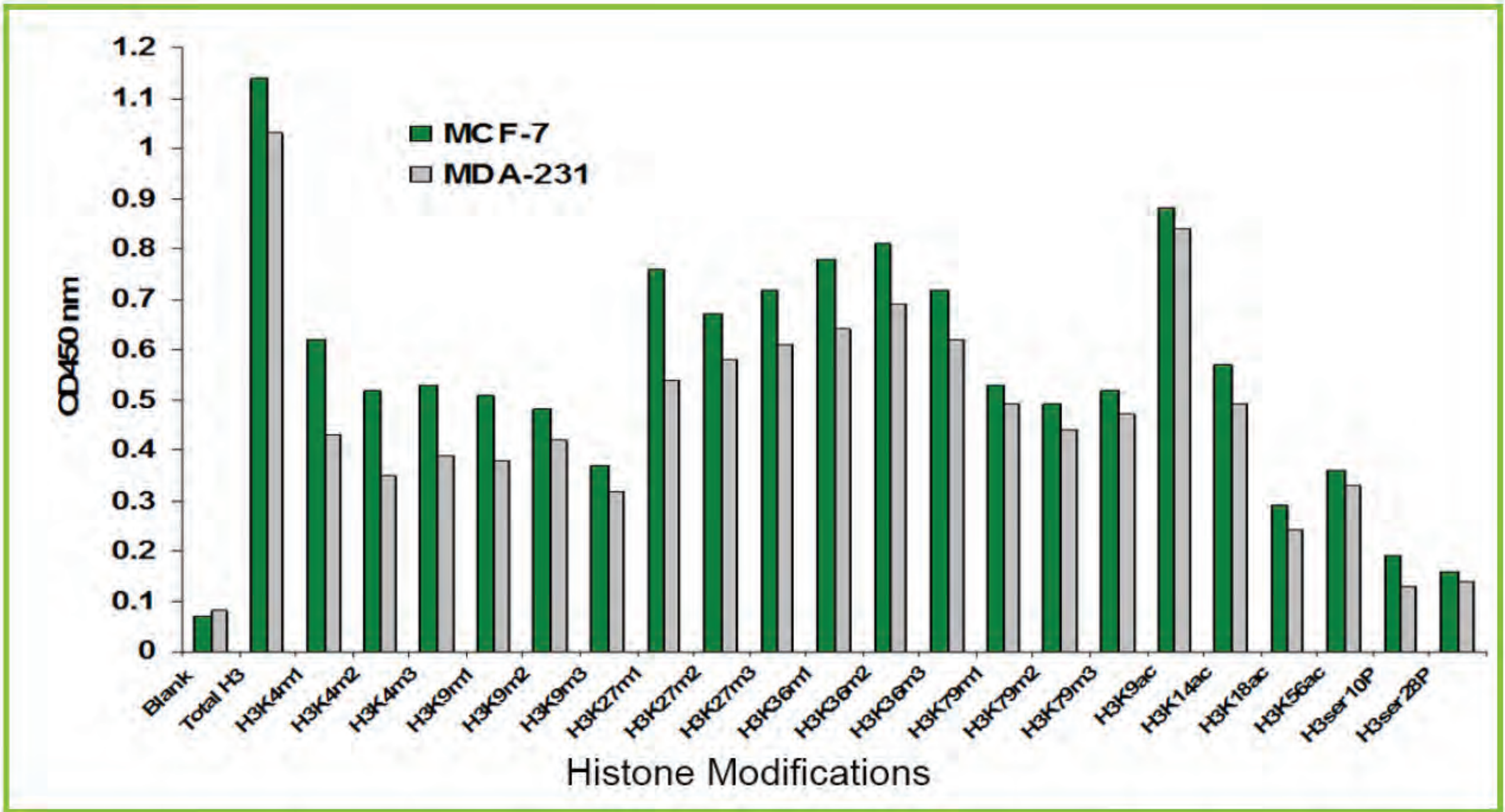
Plate layout of histone H3 modifications with the kit (also available for H4):

	1	2	3	4	5	6	7	8	9	10	11	12
A	Assay control 5 ng	Blank	H3K4me2	H3K9me1	H3K9me3	H3K27me2	H3K36me1	H3K36me3	H3K79me2	H3K9ac	H3K18ac	H3ser10P
B	Assay control 5 ng	Blank	H3K4me2	H3K9me1	H3K9me3	H3K27me2	H3K36me1	H3K36me3	H3K79me2	H3K9ac	H3K18ac	H3ser10P
C	Assay control 25 ng	Blank	H3K4me2	H3K9me1	H3K9me3	H3K27me2	H3K36me1	H3K36me3	H3K79me2	H3K9ac	H3K18ac	H3ser10P
D	Assay control 25 ng	Blank	H3K4me2	H3K9me1	H3K9me3	H3K27me2	H3K36me1	H3K36me3	H3K79me2	H3K9ac	H3K18ac	H3ser10P
E	Total H3	H3K4me1	H3K4me3	H3K9me2	H3K27me1	H3K27me3	H3K36me2	H3K79me1	H3K79me3	H3K14ac	H3K56ac	H3ser28P
F	Total H3	H3K4me1	H3K4me3	H3K9me2	H3K27me1	H3K27me3	H3K36me2	H3K79me1	H3K79me3	H3K14ac	H3K56ac	H3ser28P
G	Total H3	H3K4me1	H3K4me3	H3K9me2	H3K27me1	H3K27me3	H3K36me2	H3K79me1	H3K79me3	H3K14ac	H3K56ac	H3ser28P
H	Total H3	H3K4me1	H3K4me3	H3K9me2	H3K27me1	H3K27me3	H3K36me2	H3K79me1	H3K79me3	H3K14ac	H3K56ac	H3ser28P

EpiQuik™ Histone H3 Modification Multiplex Assay Kit
Simultaneously screen and measure 21 different, well-characterized histone H3 modifications in only 2.5 hours.

EpiQuik™ Histone H4 Modification Multiplex Assay Kit
In a simple 2.5 hour procedure, detect and quantify nearly all histone H4 modifications (10 different types) simultaneously.

***Also Available**
EpiQuik™ Circulating Modified Histone H3 Multiplex Assay Kit
Quantify up to 22 modified circulating histone H3 patterns simultaneously from plasma or serum in just 2.5 hours.



▲ Multiple histone H3 modifications screened and measured with the EpiQuik™ Histone H3 Modification Multiplex Assay Kit (Colorimetric) using 100 ng of total histone proteins.

- **Speed:** Finish the entire procedure in 2 hours and 30 minutes.
- **Convenience:** Colorimetric assay without the need for radioactivity, electrophoresis, chromatography, or expensive equipment. Plus, the control is included to quantify each histone modification.
- **Sensitivity:** High sensitivity with a detection limit as low as 0.5 ng/well for each modification pattern and a detection range from 20 ng to 500 ng/well of histone extracts.
- **Flexibility:** Strip-well microplate format allows either manual or high throughput assays. Single or multiple modification patterns can be analyzed within the same samples.
- **Sample amount pre-optimization:** Two extra 8-well strips are included which can be used to determine the input amount needed to fall within the detection limits of the assay.
- **Included controls:** Total histone sets are included, which can be used for normalizing total histone levels for relative comparison of histone content between different samples or different treatment conditions.
- **Reliability:** Consistent assay conditions and superior results.

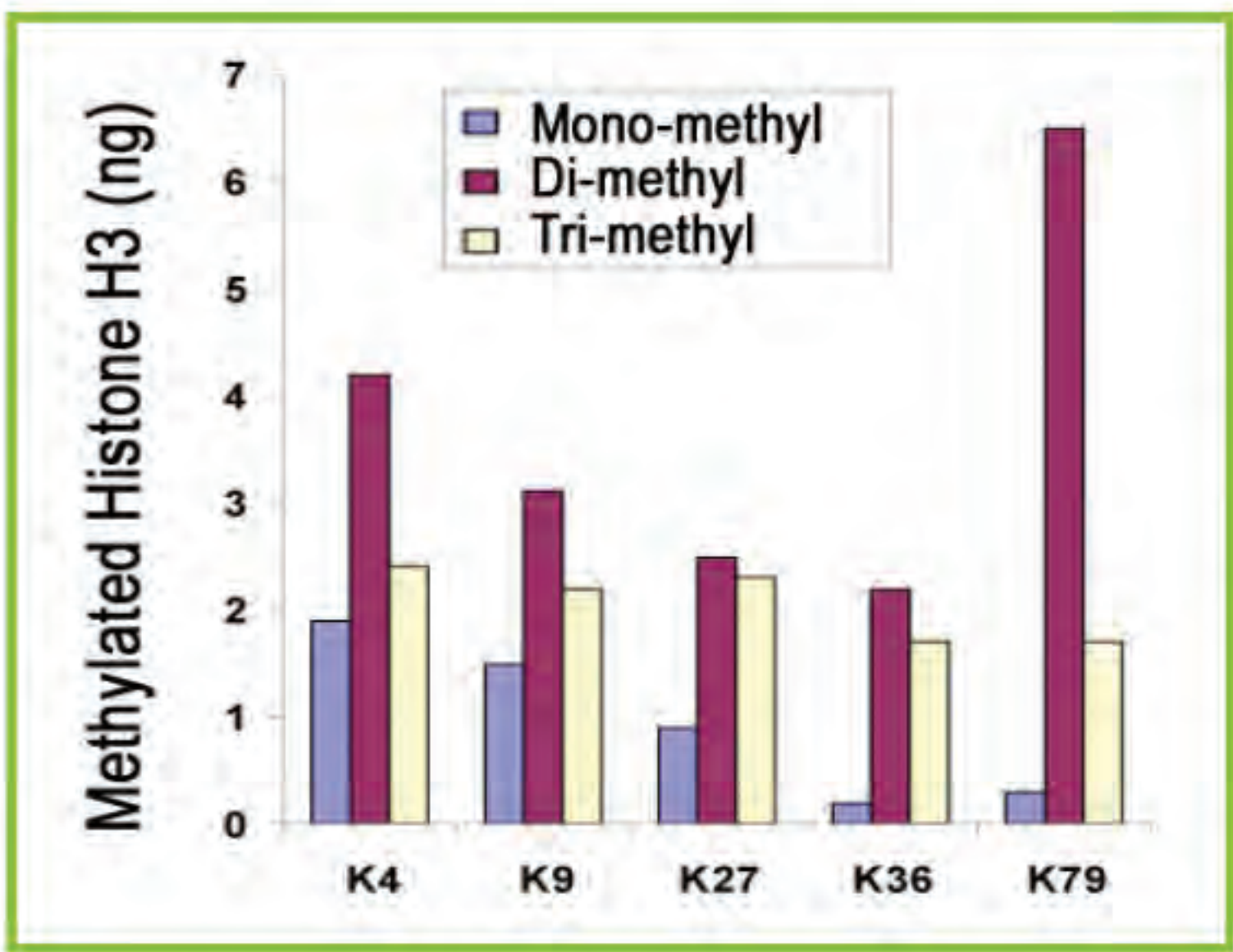
Product Name	Detection Type	Cat. No.
EpiQuik Histone H3 Modification Multiplex Assay Kit	Colorimetric	P-3100
EpiQuik Histone H4 Modification Multiplex Assay Kit	Colorimetric	P-3102
*EpiQuik Circulating Modified Histone H3 Multiplex Assay Kit	Colorimetric	P-3106

Histone H3 & H4 Methylation Quantification

Histone methylation is the modification of certain amino acids in a histone protein by the addition of methyl groups. Methylation and demethylation of histones turn genes on and off in DNA. Quantifying histone methylation is particularly useful for studying gene expression patterns.

EpiGentek offers a complete series of ELISA-like kits, in both colorimetric and fluorometric versions, for the quantification of H3 or H4 methylation at specific lysines.

- Fast and easy 2.5 hour procedure.
- The control is conveniently included.
- No need for radioactivity, electrophoresis, or chromatography.
- Detection limit as low as 1 to 5 ng/well colorimetrically and 0.2 to 1 ng/well fluorometrically.
- Detection range, depending on the histone target and detection type, from 5 ng to 5 µg/well of histone extracts.
- Flexible strip-well microplate format for manual or high throughput assays.
- Simple, reliable, and consistent assay conditions.



▶ Histone H3 mono-, di-, and tri-methylation at different sites was quantified with the EpiQuik™ Histone H3 Methylation Quantification Kit series (Fluorometric).

Histone	Methyl Group	Detection Type	Cat. No.
H3K4	Mono-Methyl	Colorimetric	P-3024
H3K4	Mono-Methyl	Fluorometric	P-3025
H3K4	Di-Methyl	Colorimetric	P-3022
H3K4	Di-Methyl	Fluorometric	P-3023
H3K4	Tri-Methyl	Colorimetric	P-3026
H3K4	Tri-Methyl	Fluorometric	P-3027
H3K4	Pan-Methyl	Colorimetric	P-3028
H3K4	Pan-Methyl	Fluorometric	P-3029
H3K9	Mono-Methyl	Colorimetric	P-3030
H3K9	Mono-Methyl	Fluorometric	P-3031
H3K9	Di-Methyl	Colorimetric	P-3032
H3K9	Di-Methyl	Fluorometric	P-3033
H3K9	Tri-Methyl	Colorimetric	P-3034
H3K9	Tri-Methyl	Fluorometric	P-3035
H3K9	Pan-Methyl	Colorimetric	P-3036
H3K9	Pan-Methyl	Fluorometric	P-3037
H3K27	Mono-Methyl	Colorimetric	P-3038
H3K27	Mono-Methyl	Fluorometric	P-3039
H3K27	Di-Methyl	Colorimetric	P-3040
H3K27	Di-Methyl	Fluorometric	P-3041
H3K27	Tri-Methyl	Colorimetric	P-3042
H3K27	Tri-Methyl	Fluorometric	P-3043
H3K27	Pan-Methyl	Colorimetric	P-3044
H3K27	Pan-Methyl	Fluorometric	P-3045
H3K36	Mono-Methyl	Colorimetric	P-3046

Histone	Methyl Group	Detection Type	Cat. No.
H3K36	Mono-Methyl	Fluorometric	P-3047
H3K36	Di-Methyl	Colorimetric	P-3048
H3K36	Di-Methyl	Fluorometric	P-3049
H3K36	Tri-Methyl	Colorimetric	P-3050
H3K36	Tri-Methyl	Fluorometric	P-3051
H3K36	Pan-Methyl	Colorimetric	P-3052
H3K36	Pan-Methyl	Fluorometric	P-3053
H3K79	Mono-Methyl	Colorimetric	P-3054
H3K79	Mono-Methyl	Fluorometric	P-3055
H3K79	Di-Methyl	Colorimetric	P-3056
H3K79	Di-Methyl	Fluorometric	P-3057
H3K79	Tri-Methyl	Colorimetric	P-3058
H3K79	Tri-Methyl	Fluorometric	P-3059
H3K79	Pan-Methyl	Colorimetric	P-3060
H3K79	Pan-Methyl	Fluorometric	P-3061
H4K20	Mono-Methyl	Colorimetric	P-3064
H4K20	Mono-Methyl	Fluorometric	P-3065
H4K20	Di-Methyl	Colorimetric	P-3066
H4K20	Di-Methyl	Fluorometric	P-3067
H4K20	Tri-Methyl	Colorimetric	P-3068
H4K20	Tri-Methyl	Fluorometric	P-3069
H4K20	Pan-Methyl	Colorimetric	P-3070
H4K20	Pan-Methyl	Fluorometric	P-3071

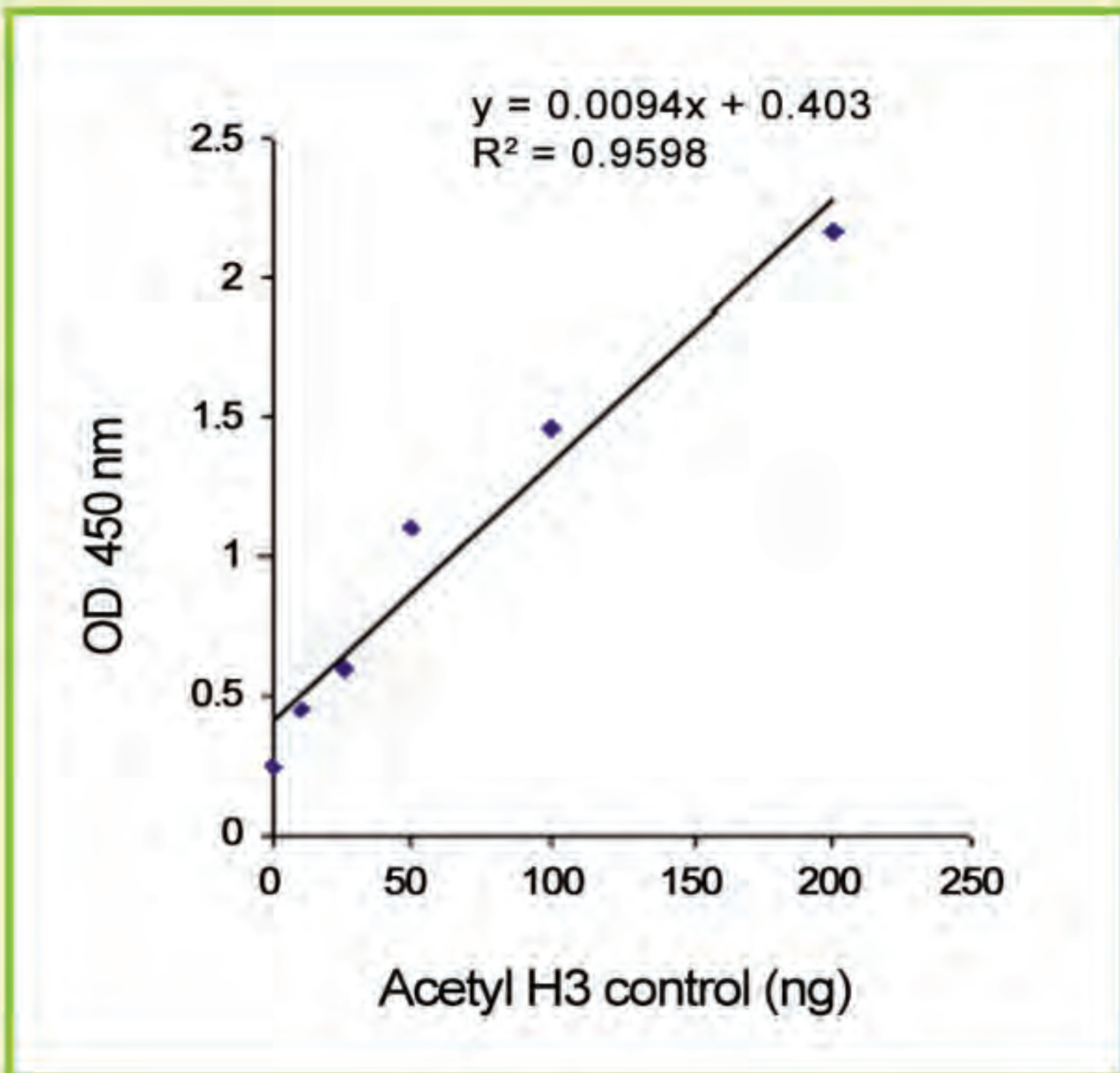
*Also available are kits for the measurement of total histone H3 (Cat. #P-3062) and total histone H4 (Cat. #P-3072)

Histone H3 & H4 Acetylation Quantification

Histone acetylation, including histone H3 and histone H4, is involved in the regulation of chromatin structure and the recruitment of transcription factors to gene promoters. Quantifying total levels of acetylated histone or levels at specific lysines will help to elucidate epigenetic regulation of gene activation, and contribute to the development of HAT or HDAC-targeted drugs.

EpiGentek offers a complete series of ELISA-like kits, in both colorimetric and fluorometric versions, for the quantification of H3 or H4 acetylation at specific lysines.

- Fast and easy 2.5 hour procedure.
- The control is conveniently included.
- No need for radioactivity, electrophoresis, or chromatography.
- Detection limit as low as 2 ng/well colorimetrically and 0.4 ng/well fluorometrically.
- Detection range, depending on the histone target and detection type, from 5 ng to 5 µg/well of histone extracts.
- Flexible strip-well microplate format for manual or high throughput assays.
- Simple, reliable, and consistent assay conditions.



▶ Acetylated histone H3 control was bound to microplate wells at different concentrations and measured using the EpiQuik™ Global Histone H3 Acetylation Assay Kit (Cat. #P-4008).

Histone	Detection Type	Cat. No.
H3K9	Colorimetric	P-4010
H3K9	Fluorometric	P-4011
H3K14	Colorimetric	P-4012
H3K14	Fluorometric	P-4013
H3K18	Colorimetric	P-4014
H3K18	Fluorometric	P-4015
H3K23	Colorimetric	P-4016
H3K23	Fluorometric	P-4017
H3K27	Colorimetric	P-4059
H3K36	Colorimetric	P-4018
H3K36	Fluorometric	P-4019
H3K56	Colorimetric	P-4020
H3K56	Fluorometric	P-4021
H4K5	Colorimetric	P-4022
H4K5	Fluorometric	P-4023
H4K8	Colorimetric	P-4024
H4K8	Fluorometric	P-4025
H4K12	Colorimetric	P-4028
H4K12	Fluorometric	P-4029
H4K16	Colorimetric	P-4026
H4K16	Fluorometric	P-4027

*Also available are kits for the measurement of global acetylation of histone H3 (Cat. #P-4008) and global acetylation of histone H4 (Cat. #P-4009)

Histone Extraction

Extract histone proteins for use in a variety of downstream applications for histone acetylation, methylation, phosphorylation, sumoylation, and more.

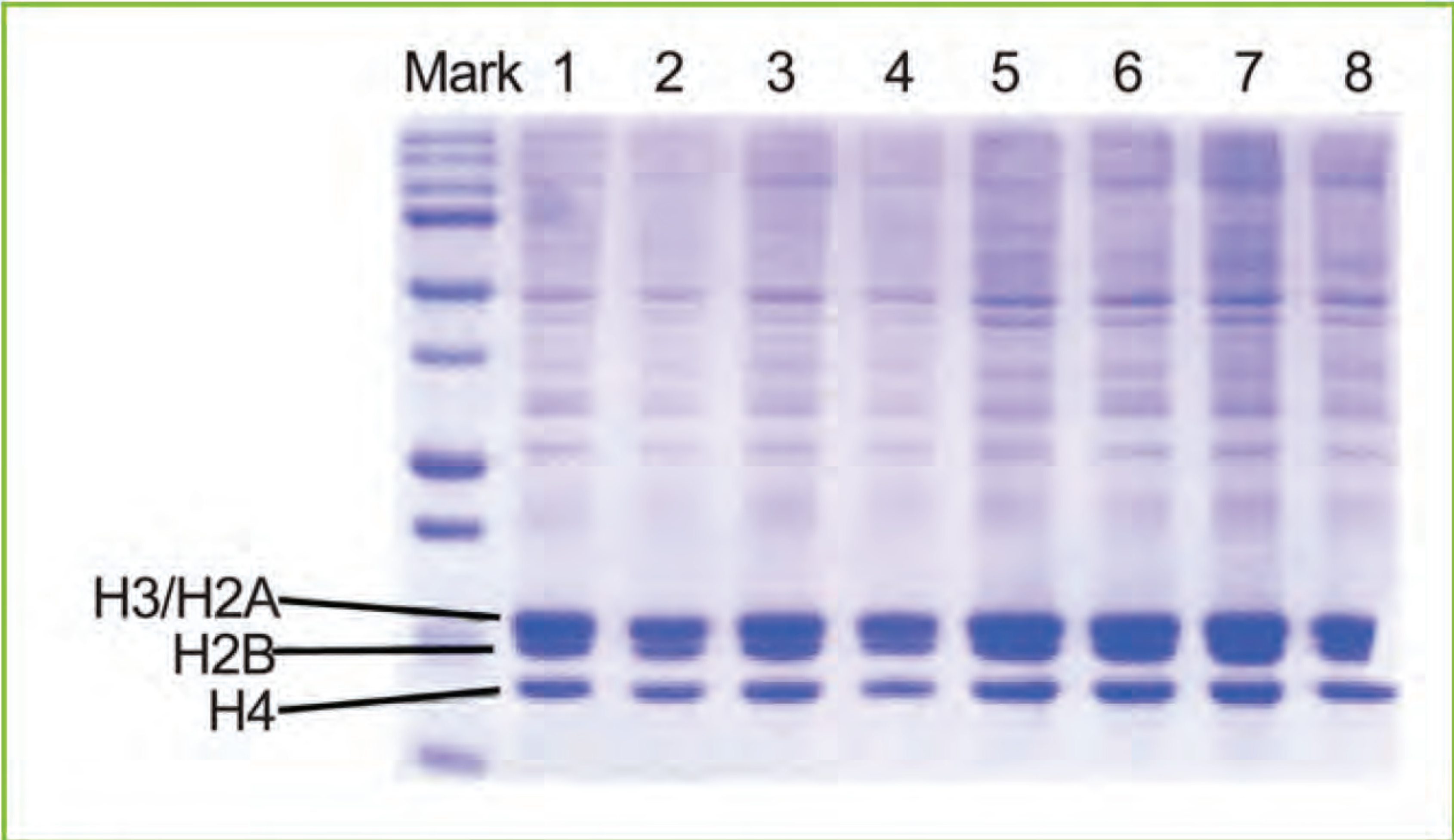
The EpiQuik™ Total Histone Extraction Kit

Extract total core histone proteins (H2A, H2B, H3, and H4) from mammalian cells or tissues.

The EpiQuik™ Total Histone Extraction HT Kit

Directly extract histone proteins from mammalian cells cultured in a 96-well plate.

- **Speed:** Pre-optimized and simple 1 hour protocol.
- **Quality:** Extracts a high yield of total core histones from a minimal amount of starting materials without affecting histone modification status or levels.
- **Convenience:** Includes all essential reagents to carry out a histone extraction.
- **Consistency:** Standardized procedure for reproducible results.
- **Accurate:** Post-translational modifications are kept intact.
- **Reliability:** Simple, reliable, and consistent assay conditions.



▲ SDS-PAGE analysis of histone extracts prepared with the EpiQuik™ Total Histone Extraction Kit (Cat. #OP-0006). 10 µg of each sample were loaded per lane (1-8).

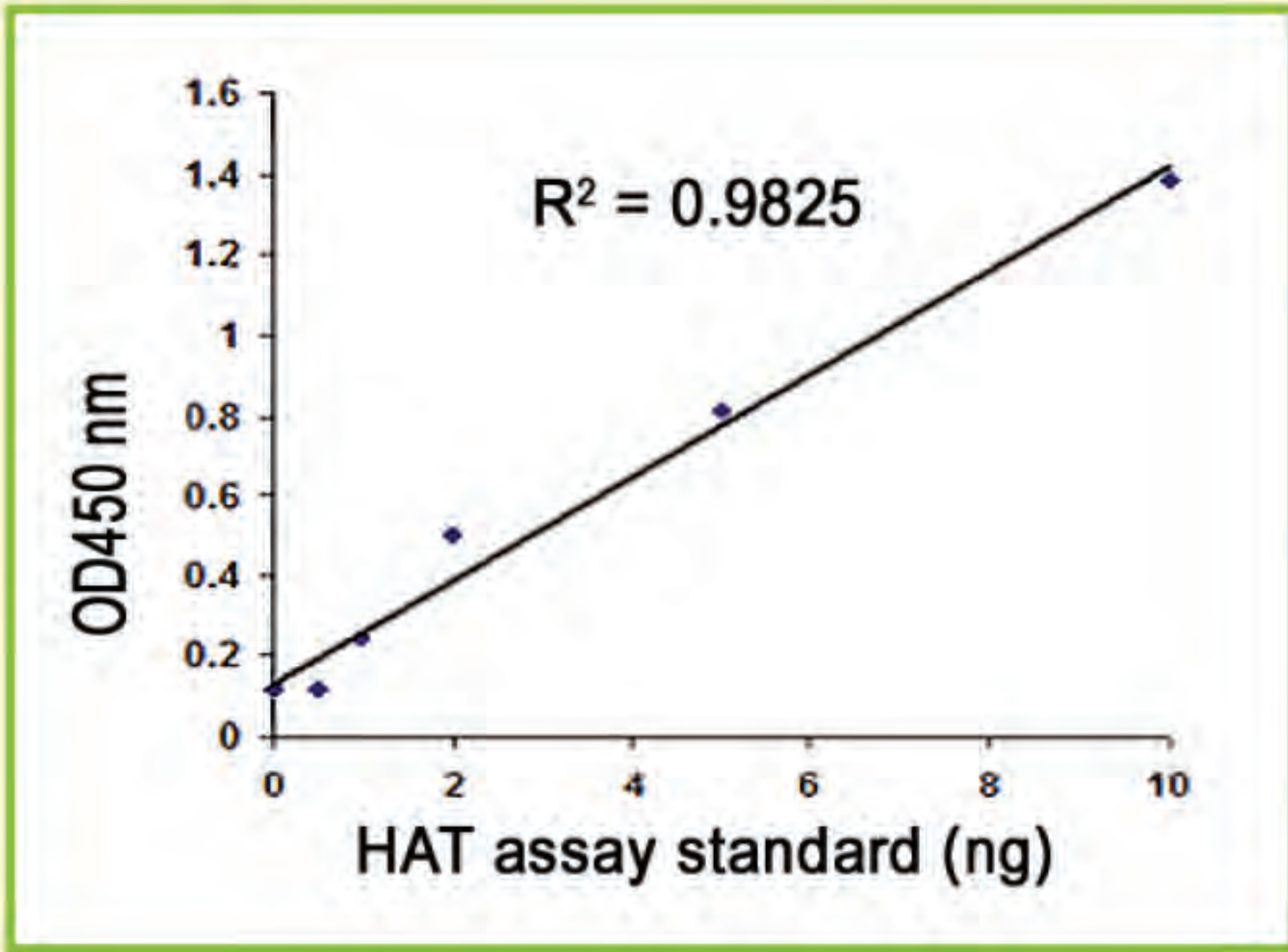
Product Name	Size	Cat. No.
EpiQuik Total Histone Extraction Kit	100 extractions	OP-0006-100
EpiQuik Total Histone Extraction HT Kit	192 extractions	OP-0007-192

Histone Acetyltransferase (HAT) & Deacetylase (HDAC)

The balance between protein acetylation and deacetylation controls several physiological and pathological cellular processes, and the enzymes involved in the maintenance of this equilibrium -- histone acetyltransferases (HATs) and histone deacetylases (HDACs) -- have been widely studied. Presently, the evidence obtained in this field suggests that the dynamic acetylation equilibrium is mostly maintained through the physical and functional interplay between HAT and HDAC activities.

The **EpiQuik™ HAT Activity/Inhibition Assay Kit** is a ready-to-use set of essential components needed to measure histone acetyltransferase activity/inhibition safely and quickly. It is suitable for measuring histone acetyltransferase activity/inhibition from a broad range of species including mammalian cells/tissues, plants, and bacteria.

- Fast and easy procedure that can be finished in 3 hours.
- Innovative colorimetric assay without radioactivity, extraction, or chromatography.
- Direct measurement of HAT activity and inhibition by quantifying the amount of acetylated histone substrate.
- Flexible strip-well microplate format for manual or high throughput assays.
- Simple, reliable, and consistent assay conditions.



▲ Illustrated standard curve generated with the EpiQuik™ HAT Activity/Inhibition Assay Kit (Cat. #P-4003).

The **EpiQuik™ HDAC Assay Kits** are a complete series of ELISA-like kits to quickly and conveniently measure histone deacetylases (HDACs), including kits that measure total HDAC activity/inhibition and kits that specifically measure HDACs 1-11.

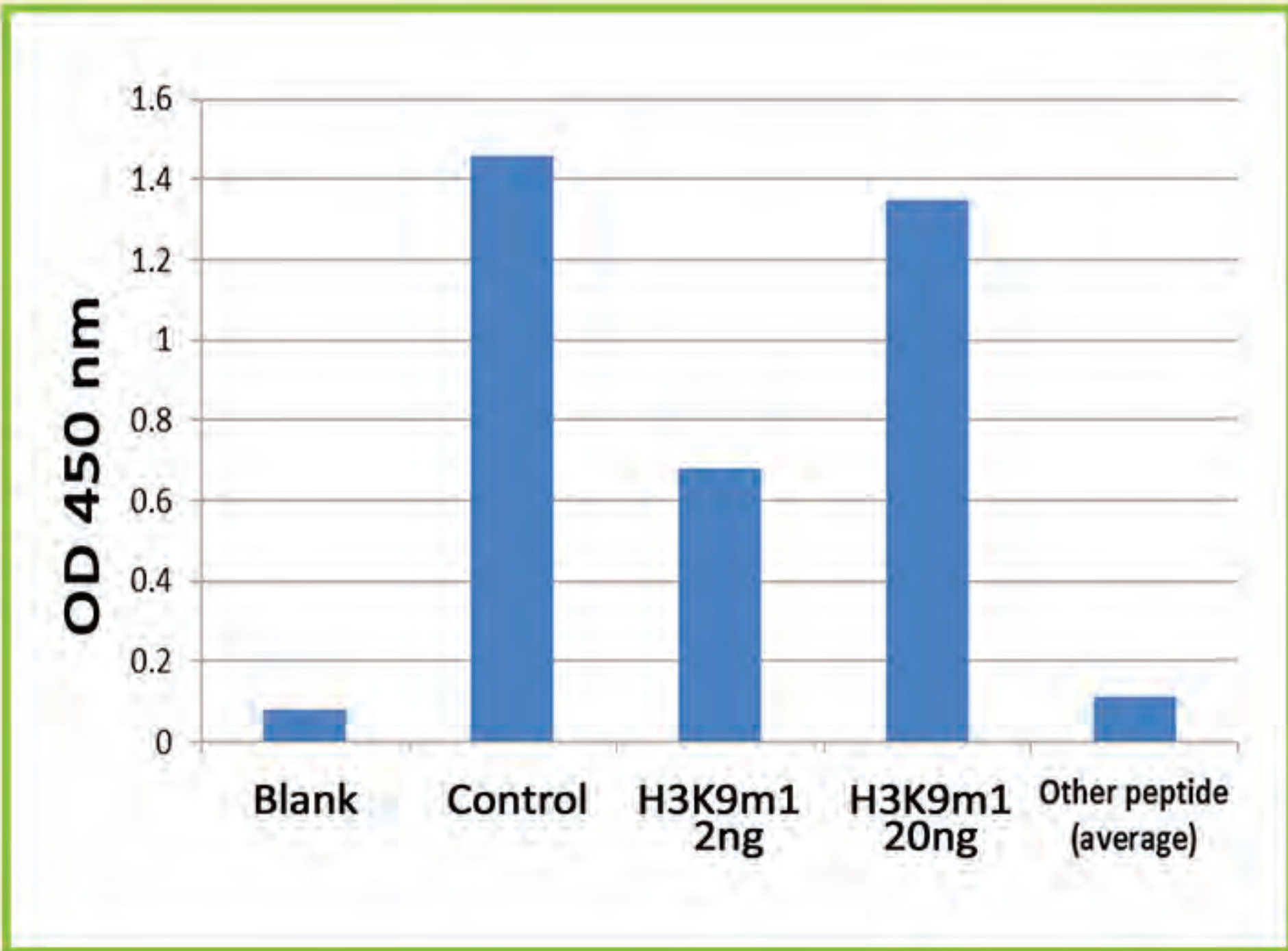
- Fast and easy procedure that can be finished in 3 to 4 hours.
- Quantitatively measures HDAC amounts without the need for electrophoresis.
- High sensitivity and specificity.
- Simple, reliable, and consistent assay conditions.

Product Name	Detection Type	Cat. No.
EpiQuik HAT Activity/Inhibition Assay Kit	Colorimetric	P-4003
EpiQuik HDAC1 Assay Kit	Colorimetric	P-4005
EpiQuik HDAC2 Assay Kit	Colorimetric	P-4006
EpiQuik HDAC3 Assay Kit	Colorimetric	P-4040
EpiQuik HDAC4 Assay Kit	Colorimetric	P-4042
EpiQuik HDAC5 Assay Kit	Colorimetric	P-4044
EpiQuik HDAC6 Assay Kit	Colorimetric	P-4046
EpiQuik HDAC7 Assay Kit	Colorimetric	P-4048
EpiQuik HDAC8 Assay Kit	Colorimetric	P-4007
EpiQuik HDAC9 Assay Kit	Colorimetric	P-4050
EpiQuik HDAC10 Assay Kit	Colorimetric	P-4052
EpiQuik HDAC11 Assay Kit	Colorimetric	P-4054
Epigenase HDAC Activity/Inhibition Direct Assay Kit	Colorimetric	P-4034
Epigenase HDAC Activity/Inhibition Direct Assay Kit	Fluorometric	P-4035

Histone H3 & H4/H2A/H2B Peptide Arrays

The **Pre-Sure™ Histone H3 Peptide Array ELISA Kit** is a complete set of optimized reagents designed to rapidly examine the selectivity and specificity of antibodies against 46 different histone modifications in a simple, ELISA-like format with use of a standard microplate reader. This kit is also suitable for identifying substrates of histone modifying enzymes as well as for analyzing specificity of histone binding proteins.

- Quick and efficient 1 hour and 45 minute procedure.
- High quality peptides (over 95% pure), coated in two concentrations, allow for the screening of both strong and weak reactive antibodies, enzymes, and histone binding proteins.
- The most comprehensive variety of histone H3 modifications.
- Easy and convenient ELISA-like format.
- Simple, reliable, and consistent assay conditions.



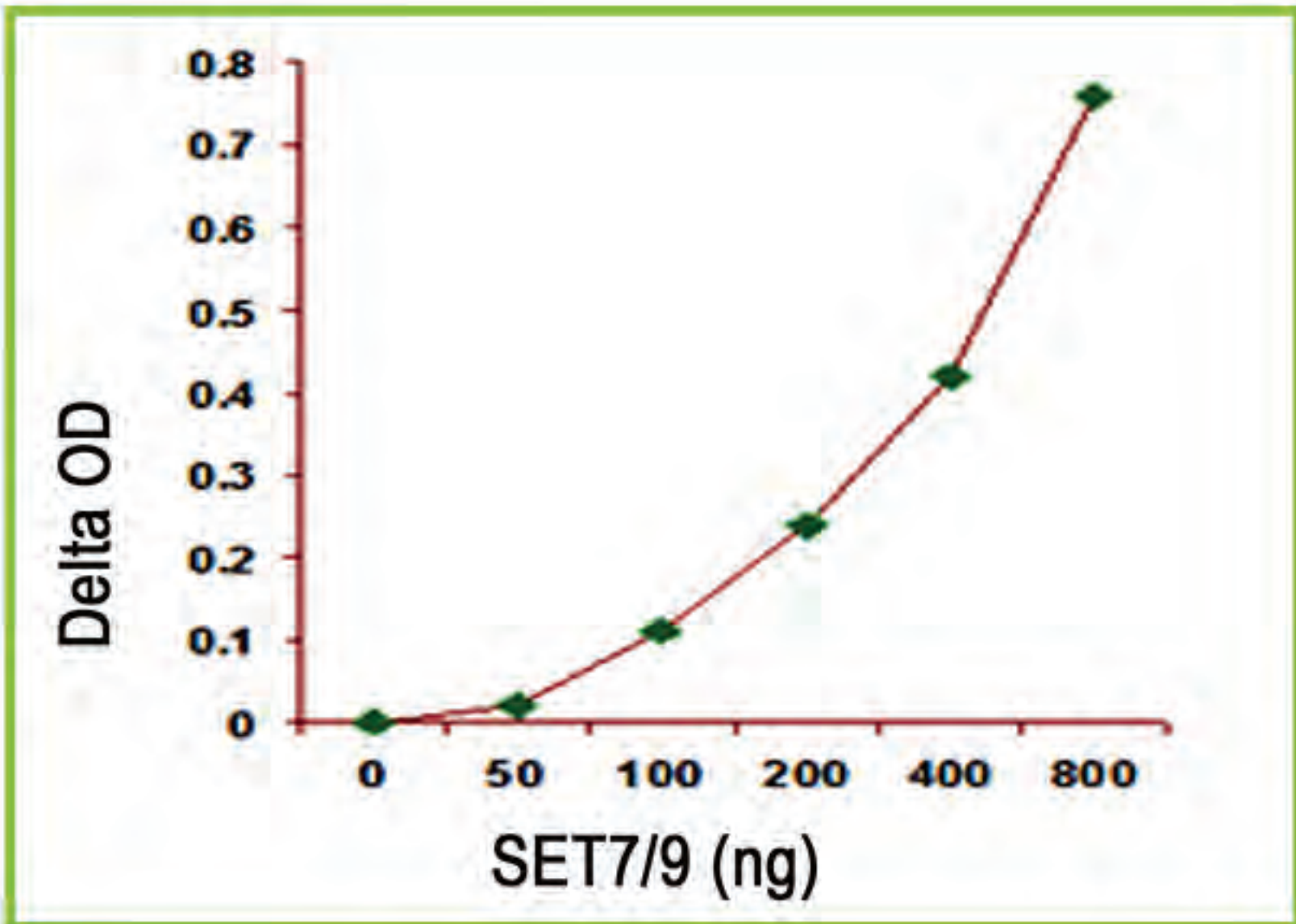
Representative specificity identification of histone H3 antibodies using the Pre-Sure™ Histone H3 Peptide Array ELISA Kit (Cat. #P-3104). The Histone H3 Array was probed with H3K9me1 Polyclonal Antibody (Cat. #A-4034; 1 µg/mL). Peptides and control were visualized using a goat anti-rabbit IgG-HRP and a color development system.

Product Name	Detection Type	Cat. No.
Pre-Sure Histone H3 Peptide Array ELISA Kit	Colorimetric	P-3104

Histone Methyltransferase (HMT)

The **EpiQuik™ Histone Methyltransferase Activity/Inhibition Assay Kits** are designed for measuring HMTs that specifically target H3 histones at lysines 4, 9, and 27. The kits feature a rapid 3 hour procedure in a flexible strip-well microplate format without the need for radioactivity, extraction, or chromatography.

The **EpiQuik™ PRMT Methyltransferase (Type II-Specific) Activity/Inhibition Assay Kit** measures activity or inhibition of total type II PRMT in only 3 hours via flexible strip-well microplate format.



Demonstration of high sensitivity of the EpiQuik™ Histone Methyltransferase Activity/Inhibition Assay Kit (H3K4) (Cat. #P-3002) for detecting H3K4-specific enzyme activity using a recombinant SET7/9 protein.

Product Name	Cat. No.
EpiQuik Histone Methyltransferase Activity/Inhibition Assay Kit (H3K4)	P-3002
EpiQuik Histone Methyltransferase Activity/Inhibition Assay Kit (H3K9)	P-3003
EpiQuik Histone Methyltransferase Activity/Inhibition Assay Kit (H3K27)	P-3005
EpiQuik PRMT Methyltransferase (Type II-Specific) Activity/Inhibition Assay Kit (Colorimetric)	P-3088

Histone Phosphorylation & Sumoylation

The **EpiQuik™ Histone H3 Phosphorylation Kits** are designed to measure changes in histone phosphorylation levels that specifically target H3 histones at serine 10 and serine 28. The kits feature a rapid 3 hour procedure in a flexible strip-well microplate format without the need for radioactivity, extraction, or chromatography.

The **EpiQuik™ In Vivo HDAC1 Sumoylation Assay Kit** measures *in vivo* HDAC1 sumoylation in only 3 hours via flexible strip-well microplate format.

Product Name	Cat. No.
EpiQuik In Situ Histone H3 Phosphorylation (Ser10) Assay Kit	P-7001
EpiQuik Global Histone H3 Phosphorylation (Ser10) Assay Kit (Colorimetric)	P-7002
EpiQuik Global Histone H3 Phosphorylation (Ser28) Assay Kit (Colorimetric)	P-7004
EpiQuik In Vivo HDAC1 Sumoylation Assay Kit	P-8002

Histone H3 Citrullination

The **EpiQuik™ Histone H3 Citrullination ELISA Kit** is designed to measure total citrullinated histone H3 (at arginines R2, R8, R17) from a broad range of species in only 3.5 hours.

The **EpiQuik™ Circulating Histone H3 Citrullination ELISA Kit** is designed to measure total citrullinated histone H3 (at arginines R2, R8, R17) directly from plasma or serum from a broad range of species in only 2.5 hours.

Product Name	Cat. No.
EpiQuik Histone H3 Citrullination ELISA Kit	P-3095
EpiQuik Circulating Histone H3 Citrullination ELISA Kit	P-3097

Featured Histone Modification Antibodies

Antibody	Cat No.	Type	Applications*
Histone H1	A68325	Rabbit Polyclonal	WB
Histone H1K25me1	A68342	Rabbit Polyclonal	WB
Histone H1K25me2	A68343	Rabbit Polyclonal	WB
Histone H1K25me3	A68370	Rabbit Polyclonal	WB
Histone H2A.ZK4ac	A68365	Rabbit Polyclonal	WB
Histone H2A.ZK7ac	A68351	Rabbit Polyclonal	WB
Histone H2AK5ac	A-4300	Rabbit Polyclonal	WB, E, IH, IF, IP
Histone H2AK5ac	A68350	Rabbit Polyclonal	WB
Histone H2BK5ac	A68366	Rabbit Polyclonal	WB
Histone H2BK12ac	A68352	Rabbit Polyclonal	WB
Histone H2BK15ac	A68353	Rabbit Polyclonal	WB
Histone H2BK20ac	A68354	Rabbit Polyclonal	WB
Histone H2BK23ac	A68355	Rabbit Polyclonal	WB
Histone H2BK5me3	A68368	Rabbit Polyclonal	WB
Histone H2BK25me1	A68344	Rabbit Polyclonal	WB
Histone H2BK25me2	A68345	Rabbit Polyclonal	WB
Histone H2BK43me2	A68346	Rabbit Polyclonal	WB
Histone H2BK43me3	A68347	Rabbit Polyclonal	WB
Histone H3.3	A68371	Rabbit Polyclonal	WB, IHC, IF, E
Histone H3K4ac	A68331	Rabbit Polyclonal	WB
Histone H3K4me1	A-4031	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K4me2	A-4032	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K4me3	A-4033	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K5me1	A68321	Rabbit Polyclonal	WB, E
Histone H3K5me2	A68322	Rabbit Polyclonal	WB, E
Histone H3K9ac	A-4054	Mouse Monoclonal	WB, IHC, E
Histone H3K9ac	A-4022	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3K9/14ac	A-4021	Rabbit Polyclonal	WB, E, IF, IH, IP ✓
Histone H3K9me1	A-4034	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K9me2	A-4035	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K9me3	A-4036	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K10me1	A68319	Rabbit Polyclonal	WB, E
Histone H3K10me2	A68324	Rabbit Polyclonal	WB, E
Histone H3K14ac	A-4023	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K14me1	A-3721	Rabbit Polyclonal	WB, IHC, IF
Histone H3K14me2	A-3722	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3K14me3	A-3723	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3K18ac	A-4024	Rabbit Polyclonal	WB, IF, IHC, IP ✓
Histone H3K23ac	A-4025	Rabbit Polyclonal	WB, E, IF
Histone H3K27ac	A-4708	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3K27me1	A-4037	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K27me2	A-4038	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K27me3	A-4039	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K36ac	A68348	Rabbit Polyclonal	WB
Histone H3K36me1	A-4040	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K36me2	A-4041	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K36me3	A-4042	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K37me1	A68320	Rabbit Polyclonal	WB, E
Histone H3K56ac	A-4026	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3K79ac	A68349	Rabbit Polyclonal	WB
Histone H3K79me1	A-4043	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K79me2	A-4044	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K79me3	A-4045	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H3K80me1	A68323	Rabbit Polyclonal	WB, E
Histone H3R2me1	A-3713	Rabbit Polyclonal	WB, IHC, IF ✓
Histone H3R2me2a	A-3714	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3R2me2s	A-3705	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3R8me1	A-3715	Rabbit Polyclonal	WB, IHC, IF ✓

Antibody	Cat No.	Type	Applications*
Histone H3R8me2a	A-3716	Rabbit Polyclonal	WB, IHC, IF
Histone H3R8me2s	A-3706	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3R17me1	A-3710	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H3R17me2a	A-3709	Rabbit Polyclonal	WB, IHC, IF, IP
Histone H3R17me2s	A-3711	Rabbit Polyclonal	WB, IHC, IF
Histone H3R26me1	A-3719	Rabbit Polyclonal	WB, IHC, IF, IP
Histone H3R26me2a	A-3707	Rabbit Polyclonal	WB, IF, IP
Histone H3R26me2s	A-3712	Rabbit Polyclonal	WB, IF
Histone H4K5ac	A68356	Rabbit Polyclonal	WB
Histone H4K5ac	A-4027	Rabbit Polyclonal	WB, IHC, IF, E
Histone H4K8ac	A-4028	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H4K12ac	A68357	Rabbit Polyclonal	WB
Histone H4K12ac	A-4029	Rabbit Polyclonal	WB, IF, IHC, E
Histone H4K20me1	A-4046	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H4K20me2	A-4047	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H4K20me3	A-4048	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Histone H4K59me2	A68337	Rabbit Polyclonal	WB
Histone H4K59me3	A68338	Rabbit Polyclonal	WB
Histone H4K79me1	A68339	Rabbit Polyclonal	WB
Histone H4K79me2	A68340	Rabbit Polyclonal	WB
Histone H4K79me3	A68341	Rabbit Polyclonal	WB
Histone H4K91ac	A68367	Rabbit Polyclonal	WB
Histone H4R3me1	A68369	Rabbit Polyclonal	WB
Histone H4R3me2a	A-3708	Rabbit Polyclonal	WB, IHC, IF, IP ✓
Histone H4R3me2s	A-3718	Rabbit Polyclonal	WB, IHC, IF
PanKme2	A-3725	Rabbit Polyclonal	WB, IF, IP
Phospho-Histone H1 (Ser1)	A68358	Rabbit Polyclonal	WB
Phospho-Histone H1 (Thr17)	A68360	Rabbit Polyclonal	WB
Phospho-Histone H1 (Thr3)	A68359	Rabbit Polyclonal	WB
Phospho-Histone H2A (Ser129)	A68336	Rabbit Polyclonal	WB
Phospho-Histone H2A (T121)	A68372	Rabbit Polyclonal	WB, IHC, E
Phospho-Histone H2A.X (Ser139)	A68362	Rabbit Polyclonal	WB
Phospho-Histone H2A.X (Thr120)	A68361	Rabbit Polyclonal	WB
Phospho-Histone H2A.X (Tyr142)	A68363	Rabbit Polyclonal	WB
Phospho-Histone H2B (Ser14)	A68364	Rabbit Polyclonal	WB
Phospho-Histone H2B (Ser32)	A68335	Rabbit Polyclonal	WB
Phospho-Histone H3 (Ser10)	A-4049	Mouse Monoclonal	WB, E, IF, IHC, IP ✓
Phospho-Histone H3 (Ser10)	A68397	Rabbit Polyclonal	WB
Phospho-Histone H3 (Ser28)	A-4050	Rabbit Polyclonal	WB, E, IF, IHC, IP ✓
Phospho-Histone H3 (T3)	A68380	Rabbit Polyclonal	WB, IHC, E
Phospho-Histone H3 (Thr11)	A-4052	Rabbit Polyclonal	WB, IF, IHC, E, IP
Phospho-Histone H3 (Thr118)	A68330	Rabbit Polyclonal	WB
Phospho-Histone H3 (Thr3)	A-4051	Rabbit Polyclonal	WB, E, IHC, IP
Phospho-Histone H3 (Thr32)	A68327	Rabbit Polyclonal	WB
Phospho-Histone H3 (Thr45)	A68329	Rabbit Polyclonal	WB
Phospho-Histone H3 (Thr6)	A68326	Rabbit Polyclonal	WB
Phospho-Histone H3 (Tyr41)	A68328	Rabbit Polyclonal	WB
Phospho-Histone H3.3 (S31)	A68379	Rabbit Polyclonal	IHC, IF, E
Phospho-Histone H3.3 (Ser32)	A-7700	Rabbit Polyclonal	WB
Phospho-Histone H4 (Ser1)	A68332	Rabbit Polyclonal	WB
Phospho-Histone H4 (Ser47)	A68333	Rabbit Polyclonal	WB
Phospho-Histone H4 (Thr80)	A68334	Rabbit Polyclonal	WB



100% Satisfaction Guarantee
All EpiGentek products are covered by our 6-month product guarantee.

* Antibody Applications: WB = Western Blot ; E = ELISA ; ICC = Immunocytochemistry ; IHC = Immunohistochemistry ; IF = Immunofluorescence ; IP = Immunoprecipitation ; ✓ = ChIP-grade certified

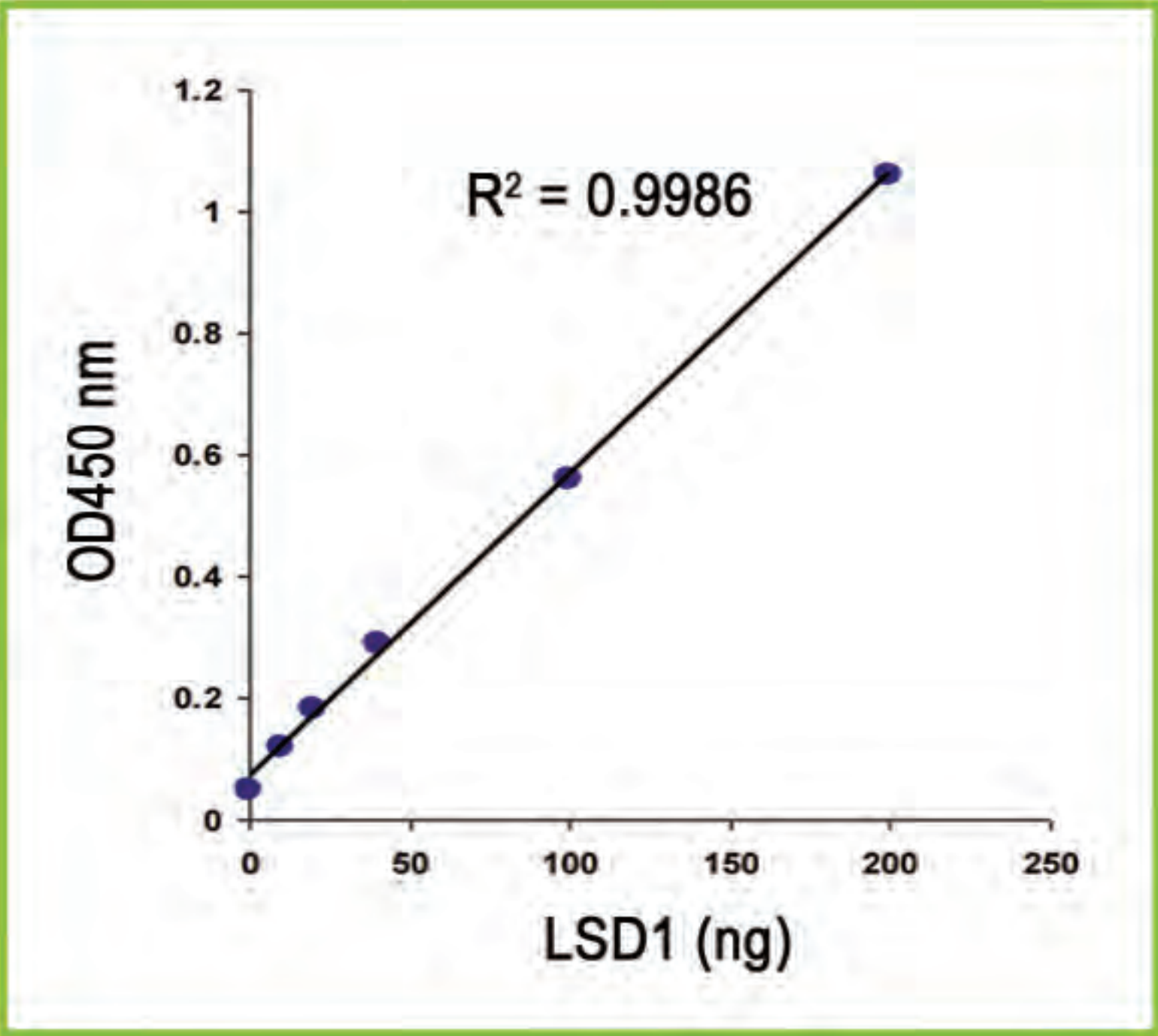
Featured Histone Modification Peptides

Peptide	Cat No.	Labeling	Peptide	Cat No.	Labeling	Peptide	Cat No.	Labeling	Peptide	Cat No.	Labeling
H3 (residues 1-21)	R-1003	Unlabeled	H3K9me1	R-1024	Unlabeled	H3K27me3	R-1035	Biotinylated	H4 (residues 1-21)	R-1007	Biotinylated
H3 (residues 1-21)	R-1004	Biotinylated	H3K9me1	R-1025	Biotinylated	H3K36me1	R-1036	Unlabeled	H4K5ac	R-1014	Unlabeled
H3 (residues 15-39)	R-1005	Unlabeled	H3K9me2	R-1026	Unlabeled	H3K36me1	R-1037	Biotinylated	H4K8ac	R-1015	Unlabeled
H3 (residues 21-44)	R-1006	Biotinylated	H3K9me2	R-1027	Biotinylated	H3K36me2	R-1038	Unlabeled	H4K12ac	R-1016	Unlabeled
H3 (residues 69-89)	R-1057	Biotinylated	H3K9me3	R-1028	Unlabeled	H3K36me2	R-1049	Biotinylated	H4K16ac	R-1017	Unlabeled
H3K4me1	R-1018	Unlabeled	H3K9me3	R-1029	Biotinylated	H3K36me3	R-1039	Unlabeled	H4K20me1	R-1043	Unlabeled
H3K4me1	R-1019	Biotinylated	H3K14ac	R-1011	Unlabeled	H3K36me3	R-1050	Biotinylated	H4K20me1	R-1054	Biotinylated
H3K4me2	R-1020	Unlabeled	H3K14ac	R-1012	Biotinylated	H3K79me1	R-1040	Unlabeled	H4K20me2	R-1044	Unlabeled
H3K4me2	R-1021	Biotinylated	H3K23ac	R-1013	Unlabeled	H3K79me1	R-1051	Biotinylated	H4K20me3	R-1045	Unlabeled
H3K4me3	R-1022	Unlabeled	H3K27me1	R-1030	Unlabeled	H3K79me2	R-1041	Unlabeled	H4K20me3	R-1056	Biotinylated
H3K4me3	R-1023	Biotinylated	H3K27me1	R-1031	Biotinylated	H3K79me2	R-1052	Biotinylated	Phospho-H3(Ser10)	R-1047	Biotinylated
H3K9ac	R-1009	Unlabeled	H3K27me2	R-1032	Unlabeled	H3K79me3	R-1042	Unlabeled	Phospho-H3(Ser10)	R-1046	Unlabeled
H3K9ac	R-1010	Biotinylated	H3K27me2	R-1033	Biotinylated	H4ac	R-1008	Biotinylated	Phospho-H3(Ser28)	R-1048	Unlabeled
			H3K27me3	R-1034	Unlabeled						

LSD1 Histone Demethylase

Detection of activity and inhibition of LSD1 is important for elucidating mechanisms of epigenetic regulation of gene activation and silencing, and could also benefit cancer diagnostics and therapeutics. EpiGentek offers a complete set of optimized buffers and reagents for the rapid measurement of LSD1 activity.

- **Speed:** 3 hour procedure in a 96 strip-well microplate format allows for either manual or high throughput analysis.
- **Efficiency:** Directly measures LSD1 activity through a straightforward detection of LSD1-converted demethylated products, rather than by-products.
- **Convenience:** Both cell/tissue extracts and purified LSD1 can be used, which allows for the detection of inhibitory effects of LSD1 inhibitors *in vivo* and *in vitro*.
- **Sensitivity:** Up to 50 times more sensitive than H₂O₂/formaldehyde release-based LSD1 assays, allowing activity to be detected from as low as 2 ng of purified LSD1 enzyme.
- **Quality:** Demethylated histone standard is included, allowing specific activity of LSD1 to be quantified.



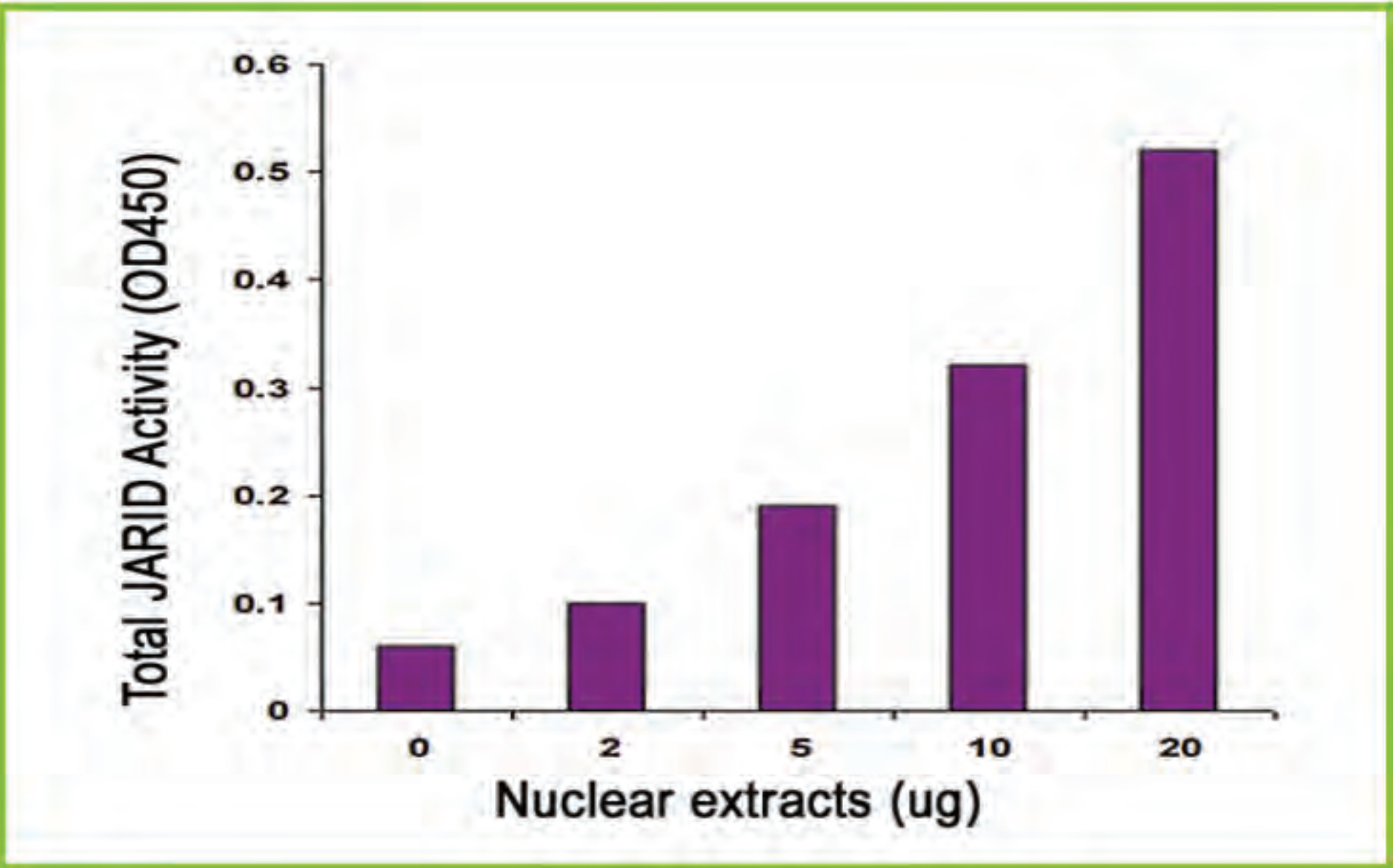
High sensitivity of LSD1 activity assay achieved by using recombinant LSD1 with Epigenase™ LSD1 Demethylase Activity/Inhibition Assay Kit (Colorimetric) (Cat. #P-3078).

Product Name	Cat. No.
Epigenase LSD1 Demethylase Activity/Inhibition Assay Kit (Colorimetric)	P-3078
Epigenase LSD1 Demethylase Activity/Inhibition Assay Kit (Fluorometric)	P-3079

JmjC Histone Demethylases

The Epigenase™ assay kits for JMJD2, JMJD3/UTX, and JARID demethylase activity or inhibition contain all the reagents necessary for the measurement of activity/inhibition of JmjC domain-containing histone demethylases.

- **Speed:** 3 hour procedure in a 96 strip-well microplate format.
- **Efficiency:** Directly measures JMJD2, JMJD3/UTX, or JARID activity through a straightforward detection of JMJD2-, JMJD3/UTX-, or JARID-converted demethylated products, rather than by-products.
- **Sensitivity:** Up to 2,000 times higher than formaldehyde release-based JMJD2, JMJD3/UTX, or JARID assays, allowing activity to be detected from as low as 5 ng of purified JMJD2, JMJD3/UTX, or JARID enzymes.
- **Reliability:** Simple, reliable, and consistent assay conditions.



High sensitivity of a JARID activity assay achieved by using the Epigenase™ JARID Demethylase Activity/Inhibition Assay Kit (Colorimetric) (Cat. #P-3082) with A549 nuclear extracts.

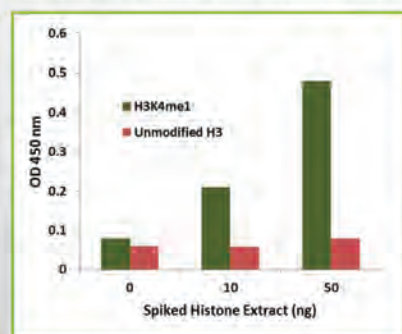
Product Name	Cat. No.
Epigenase JMJD2 Demethylase Activity/Inhibition Assay Kit (Colorimetric)	P-3080
Epigenase JMJD2 Demethylase Activity/Inhibition Assay Kit (Fluorometric)	P-3081
Epigenase JARID Demethylase Activity/Inhibition Assay Kit (Colorimetric)	P-3082
Epigenase JARID Demethylase Activity/Inhibition Assay Kit (Fluorometric)	P-3083
Epigenase JMJD3/UTX Demethylase Activity/Inhibition Assay Kit (Colorimetric)	P-3084
Epigenase JMJD3/UTX Demethylase Activity/Inhibition Assay Kit (Fluorometric)	P-3085

Quantify Histone H3 Directly from Plasma or Serum

Circulating histones in plasma or serum has been observed and demonstrated as the marker for many different diseases or pathological changes such as in cancer. Therefore, quantitative detection of circulating histone could be useful for better understanding epigenetic regulation of cellular processes and for discovering new circulating biomarkers.

To support investigators in their circulating histones research projects, EpiGentek offers a series of ELISA kits for the quantification of circulating histone H3 in serum or plasma.

- Fast and easy 2.5 hour procedure.
- The control is conveniently included.
- High sensitivity and specificity. The detection limit is as low as 0.5 ng/well with dynamic range of 1-20 ng/well within the indicated amount range of the plasma/serum.
- No cross-reactivity with unmodified H3 or other modifications at the same site.
- Flexible strip-well microplate format for manual or high throughput assays.
- Simple, reliable, and consistent assay conditions.



▶ Histone extracts were prepared from HL-60 cells using the EpiQuik Total Histone Extraction Kit (Cat. #OP-0006) and spiked into bovine plasma at different concentrations. The amount of H3K4me1 was measured using the EpiQuik Circulating Histone H3K4me1 ELISA Kit (Cat. #P-3108).



Available kits:

Histone	Methyl Group	Detection Type	Cat. No.
H3K4me1	Mono-Methyl	Colorimetric	P-3108
H3K4me2	Di-Methyl	Colorimetric	P-3110
H3K4me3	Tri-Methyl	Colorimetric	P-3112
H3K9me1	Mono-Methyl	Colorimetric	P-3114
H3K9me2	Di-Methyl	Colorimetric	P-3116
H3K9me3	Tri-Methyl	Colorimetric	P-3118
H3K27me1	Mono-Methyl	Colorimetric	P-3120
H3K27me2	Di-Methyl	Colorimetric	P-3122
H3K27me3	Tri-Methyl	Colorimetric	P-3124
H3K36me1	Mono-Methyl	Colorimetric	P-3126
H3K36me2	Di-Methyl	Colorimetric	P-3128
H3K36me3	Tri-Methyl	Colorimetric	P-3130
H3K9ac	Acetyl	Colorimetric	P-3132
H3K18ac	Acetyl	Colorimetric	P-3134
H3K27ac	Acetyl	Colorimetric	P-3136
H3K56ac	Acetyl	Colorimetric	P-3138
H3	Total	Colorimetric	P-3091

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