

SEQUENCE LISTING

<110> Cellzome AG ✓
 <120> Methods for the identification and characterization of proteins interacting with histone tails and of compounds interacting with said proteins ✓
 <130> CEL67405PC ✓
 <160> 76
 <170> PatentIn version 3.5
 <210> 1
 <211> 40
 <212> PRT
 <213> Homo sapiens
 <400> 1

Ser Gly Arg Gly Lys Gln Gly Gly Lys Ala Arg Ala Lys Ala Lys Thr
 1 5 10 15

Arg Ser Ser Arg Ala Gly Leu Gln Phe Pro Val Gly Arg Val His Arg
 20 25 30

Leu Leu Arg Lys Gly Asn Tyr Ser
 35 40

<210> 2
 <211> 40
 <212> PRT
 <213> Homo sapiens
 <400> 2

Pro Glu Pro Ser Lys Ser Ala Pro Ala Pro Lys Lys Gly Ser Lys Lys
 1 5 10 15

Ala Ile Thr Lys Ala Gln Lys Lys Asp Gly Lys Lys Arg Lys Arg Ser
 20 25 30

Arg Lys Glu Ser Tyr Ser Ile Tyr
 35 40

<210> 3
 <211> 40
 <212> PRT
 <213> Homo sapiens
 <400> 3

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Thr Lys Ala Ala Arg Lys Ser Ala Pro Ala Thr
 20 25 30

Gly Gly Val Lys Lys Pro His Arg
 35 40

<210> 4
<211> 40
<212> PRT
<213> Homo sapiens

<400> 4

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Leu Arg Asp Asn Ile Gln Gly Ile Thr Lys Pro
20 25 30

Ala Ile Arg Arg Leu Ala Arg Arg
35 40

<210> 5
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (2)..(2)
<223> mono-methylated

<400> 5

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 6
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (2)..(2)
<223> asymetrically di-methylated

<220>
<221> PHOSPHORYLATION
<222> (3)..(3)

<400> 6

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 7
<211> 21

<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (2)..(2)
<223> asymetrically di-methylated

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<400> 7

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 8
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (2)..(2)
<223> asymetrically di-methylated

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<400> 8

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 9
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION

<220>
<221> METHYLATION
<222> (4)..(4)

<223> tri-methylated

<400> 9

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 10

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> METHYLATION

<222> (4)..(4)

<223> mono-methylated

<400> 10

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 11

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> METHYLATION

<222> (4)..(4)

<223> di-methylated

<400> 11

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 12

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> METHYLATION

<222> (4)..(4)

<223> tri-methylated

<400> 12

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 13
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (9)..(9)
<223> ACETYLATION

<400> 13

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 14
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<400> 14

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 15
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (9)..(9)
<223> ACETYLATION

<400> 15

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 16

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (9)..(9)

<223> ACETYLTATION

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLTATION

<400> 16

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 17

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (9)..(9)

<223> ACETYLTATION

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLTATION

<220>

<221> MOD_RES

<222> (11)..(11)

<223> PHOSPHORYLTATION

<400> 17

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 18

<211> 21

<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (9)..(9)
<223> mono-methylated

<400> 18

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 19
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (9)..(9)
<223> di-methylated

<400> 19

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 20
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<400> 20

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 21
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION

<222> (9)..(9)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (10)..(10)
<223> PHOSPHORYLATION

<400> 21

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 22
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (10)..(10)
<223> PHOSPHORYLATION

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<400> 22

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 23
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<400> 23

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 24
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (10)..(10)
<223> PHOSPHORYLATION

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<400> 24

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 25
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<400> 25

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala
20

<210> 26
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(1)
<223> PHOSPHORYLATION

<220>
<221> METHYLATION
<222> (3)..(3)
<223> asymetrically di-methylated

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLTATION
 <400> 26
 Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
20

<210> 27
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>
 <221> METHYLATION
 <222> (3)..(3)
 <223> asymetrically di-methylated

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLTATION
 <400> 27
 Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
20

<210> 28
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLTATION

<400> 28
 Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
20

<210> 29
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>

<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<400> 29

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 30
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (12)..(12)
<223> ACETYLATION

<400> 30

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 31
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (12)..(12)

<223> ACETYLATION

<220>

<221> MOD_RES

<222> (17)..(17)

<223> ACETYLATION

<400> 31

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 32

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> ACETYLATION

<220>

<221> MOD_RES

<222> (12)..(12)

<223> ACETYLATION

<400> 32

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 33

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> ACETYLATION

<220>

<221> MOD_RES

<222> (16)..(16)

<223> ACETYLATION

<400> 33

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 34
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<400> 34

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
 20

<210> 35
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> ACETYLATION

<400> 35

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
 20

<210> 36
 <211> 21
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<220>
 <221> METHYLATION
 <222> (12)..(12)
 <223> tri-methylated

<400> 36

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val
20

<210> 37
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (12)..(12)
<223> ACETYLATION

<400> 37

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 38
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (12)..(12)
<223> di-methylated

<400> 38

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 39
<211> 21
<212> PRT
<213> Homo sapiens

<220>
<221> METHYLATION
<222> (12)..(12)
<223> tri-methylated

<400> 39

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val
20

<210> 40
<211> 24

<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 40

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 41
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (2)..(2)
<223> mono-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 41

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 42
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (2)..(2)
 <223> asymetrically di-methylated

<220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 42

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 43
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (2)..(2)
 <223> asymetrically di-methylated

<220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION

<220>
 <221> METHYLATION
 <222> (4)..(4)
 <223> tri-methylated

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 43

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 44
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (2)..(2)
<223> asymmetrically di-methylated

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 44

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 45
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> METHYLATION
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> METHYLATION
<222> (24)..(24)
<223> Biotin

<400> 45

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 46
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (4)..(4)
<223> mono-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 46

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 47
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (4)..(4)
<223> di-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>

<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 47

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 48
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 48

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 49
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (9)..(9)
<223> ACETYLATION

<220>
<221> MUTAGEN

<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 49

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 50
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (4)..(4)
<223> tri-methylated

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 50

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 51
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> MOD_RES
<222> (9)..(9)

<223> ACETYLATION

<220>

<221> MUTAGEN

<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 51

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 52

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H3(1-21) tails: Table 36

<220>

<221> MOD_RES

<222> (9)..(9)

<223> ACETYLATION

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION

<220>

<221> MUTAGEN

<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 52

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 53

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H3(1-21) tails: Table 36

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION

<220>
 <221> MOD_RES
 <222> (11)..(11)
 <223> PHOSPHORYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 53

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 54
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (9)..(9)
 <223> mono-methylated

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 54

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 55
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (9)..(9)
 <223> di-methylated

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 55

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 56
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (9)..(9)
 <223> tri-methylated

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 56

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 57
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (9)..(9)
 <223> tri-methylated

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 57

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
 1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
 20

<210> 58
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H3(1-21) tails: Table 36

<220>
 <221> METHYLATION
 <222> (9)..(9)
 <223> tri-methylated

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION

<220>
 <221> MOD_RES
 <222> (11)..(11)
 <223> PHOSPHORYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>

<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 58

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 59
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> METHYLATION
<222> (9)..(9)
<223> tri-methylated

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 59

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 60
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> MOD_RES
<222> (10)..(10)
<223> PHOSPHORYLATION

<220>
<221> MOD_RES

<222> (11)..(11)
<223> PHOSPHORYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 60

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 61
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H3(1-21) tails: Table 36

<220>
<221> MOD_RES
<222> (11)..(11)
<223> PHOSPHORYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 61

Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro
1 5 10 15

Arg Lys Gln Leu Ala Xaa Lys Xaa
20

<210> 62
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MUTAGEN
<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 62

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 63

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H4(1-21) tails: Table 37

<220>

<221> MOD_RES

<222> (1)..(1)

<223> PHOSPHORYLATION

<220>

<221> METHYLATION

<222> (3)..(3)

<223> asymmetrically di-methylated

<220>

<221> MOD_RES

<222> (5)..(5)

<223> ACETYLATION

<220>

<221> MUTAGEN

<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 63

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 64

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H4(1-21) tails: Table 37

<220>
 <221> METHYLATION
 <222> (3)..(3)
 <223> asymetrically di-methylated

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 64

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
 20

<210> 65
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H4(1-21) tails: Table 37

<220>
 <221> METHYLATION
 <222> (3)..(3)
 <223> asymmetrically di-methylated

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 65

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
 20

<210> 66
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H4(1-21) tails: Table 37

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 66

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
 20

<210> 67
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H4(1-21) tails: Table 37

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> ACETYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 67

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 68
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (12)..(12)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (16)..(16)
<223> ACETYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 68

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 69
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (12)..(12)
<223> ACETYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 69

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 70
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MOD_RES
<222> (5)..(5)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (16)..(16)
<223> ACETYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 70

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 71
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 71

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 72
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Histone H4(1-21) tails: Table 37

<220>
<221> MOD_RES
<222> (8)..(8)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (12)..(12)
<223> ACETYLATION

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> aminohexanoic acid

<220>
<221> MUTAGEN
<222> (24)..(24)
<223> Biotin

<400> 72

ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
 20

<210> 73
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H4(1-21) tails: Table 37

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> ACETYLATION

<220>
 <221> METHYLATION
 <222> (12)..(12)
 <223> tri-methylated

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)
 <223> Biotin

<400> 73

ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
 1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
 20

<210> 74
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Histone H4(1-21) tails: Table 37

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> ACETYLATION

<220>
 <221> MUTAGEN
 <222> (22)..(22)
 <223> aminohexanoic acid

<220>
 <221> MUTAGEN
 <222> (24)..(24)

<223> Biotin

<400> 74

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 75

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H4(1-21) tails: Table 37

<220>

<221> METHYLATION

<222> (12)..(12)

<223> di-methylated

<220>

<221> MUTAGEN

<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 75

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20

<210> 76

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Histone H4(1-21) tails: Table 37

<220>

<221> METHYLATION

<222> (12)..(12)

<223> tri-methylated

<220>

<221> MUTAGEN

<222> (22)..(22)

<223> aminohexanoic acid

<220>

<221> MUTAGEN

<222> (24)..(24)

<223> Biotin

<400> 76

Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys
1 5 10 15

Arg His Arg Lys Val Xaa Lys Xaa
20