

修饰组蛋白

Modified Histones

H2A

Product Name: H2A

CAT.#: H1300

Description: This product is a chemically synthesized human H2A protein composed of 129 amino acids.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone H2A is one of the five main histone proteins involved in the structure of chromatin in eukaryotic cells. H2A is important for packaging DNA into chromatin and has been found to regulate gene expression.

Usage: Research use only

H2A-Y57ph

Product Name: H3K4me3

CAT.#: H3101

Description: Synthesized histone H2A peptide corresponding to residues within 1-129 of human histone H2A with phosphorylation Y57 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H2A-Y57ph inhibits deubiquitination of H2B by the SAGA complex as well as restricting demethylation of H3 and increasing its acetylation. Based on CK2 dependent tyrosine57 phosphorylation of H2A, a new transcriptional elongation regulator can be identified.

Usage: Research use only

<https://www.difficultpeptide.com>

H2A-T120ph

Product Name: H2A-T120ph

CAT.#: H3102

Description: Synthesized histone H2A peptide corresponding to residues within 1-129 of human histone H2A with phosphorylation T120 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H2A Thr120 phosphorylation is observed on chromatin during both mitosis and meiosis. Thr120 phosphorylation is inversely correlated with ubiquitylation of H2A Lys119 in meiotic mouse spermatocytes. In Drosophila, loss of H2A Thr120 phosphorylation is associated with a failure to disassemble the synaptonemal complex, impaired loading of condensin and female infertility. It is possible that H2A Thr120 phosphorylation is involved in the regulation of chromatin structure.

Usage: Research use only

<https://www.difficultpeptide.com>

H2A-K13Ub

Product Name: H2A-K13Ub

CAT.#: H1401

Description: Synthesized histone H2A peptide corresponding to residues within 1-129 of human histone H2A with monoubiquitination K13 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. RNF168-mediated ubiquitination of histone H2A Lys13,15 (H2AK13,15ub) at DNA double-strand breaks (DSBs) is crucial for preventing aberrant DNA repair and maintaining genome stability. USP51 is the DUB for H2AK13,15ub and regulates DNA damage response.

Usage: Research use only

<https://www.difficultpeptide.com>

H2A-K15Ub

Product Name: H2A-K15Ub

CAT.#: H1402

Description: Synthesized histone H2A peptide corresponding to residues within 1-129 of human histone H2A with monoubiquitination K15 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. RNF168-mediated ubiquitination of histone H2A Lys13,15 (H2AK13,15ub) at DNA double-strand breaks (DSBs) is crucial for preventing aberrant DNA repair and maintaining genome stability. USP51 is the DUB for H2AK13,15ub and regulates DNA damage response. 53BP1 recruitment to DSBs is triggered by RNF168-mediated ubiquitylation of histone H2A lysine 15 in the nucleosome core particle (NCP) constitutively dimethylated at histone H4 lysine 20 (NCPH2AK15ubH4K20me2), modifications recognized by 53BP1.

Usage: <http://www.difficultpeptide.com>

H2A-K119Ub

Product Name: H2A-K119Ub

CAT.#: H1403

Description: Synthesized histone H2A peptide corresponding to residues within 1-129 of human histone H2A with monoubiquitination K119 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H2A-K119Ub is characteristic of repressed developmental genes, and is also tightly linked to levels of other histone marks such as lysine methylation and acetylation.

Usage: Research use only

H2A.Z-K121Ub

Product Name: H2A.Z-K121Ub

CAT.#: H1404

Description: Synthesized histone H2A.Z peptide corresponding to residues with monoubiquitination K121 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: The histone variant H2A.Z has been implicated in nucleosome exchange, transcriptional activation and Polycomb repression. H2A.Z has been shown to be subject to C-terminal ubiquitination by the PRC1 component Ring1B.

Usage: Research use only

H2B

Product Name: H2B

CAT.#: H2300

Description: This product is a chemically synthesized human H2B protein composed of 125 amino acids.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone H2B is one of the 4 main histone proteins involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and long N-terminal and C-terminal tails, H2B is involved with the structure of the nucleosomes and helps organize eukaryotic DNA. It plays an important role in the biology of the nucleus where it is involved in the packaging and maintaining of chromosomes, regulation of transcription, and replication and repair of DNA. Histone H2B helps regulate chromatin structure and function through post-translational modifications and specialized histone variants.

Usage: Research use only
<https://www.difficultpeptide.com>

H2B-S14ph

Product Name: H2B-S14ph

CAT.#: H2301

Description: Synthesized histone H2B peptide corresponding to residues within 1-125 of human histone H2B with phosphorylation S14 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. Phosphorylation of histone H2B at serine 14 (H2B-S14Ph) is associated with DNA damage and induces apoptotic chromatin condensation. H2B-S14Ph also correlates with class switch recombination and somatic hypermutation in germinal center B cells.

Usage: Research use only
<https://www.difficultpeptide.com>

H2B-K34Ub

Product Name: H2B-K34Ub

CAT.#: H2401

Description: Synthesized histone H2B peptide corresponding to residues within 1-125 of human histone H2B with monoubiquitination K34 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H2B-K34ub modification is sufficient to promote selective eviction of only one H2A/H2B dimer independently of histone-binding agents. H2B K34 ubiquitylation significantly enhances nucleosome dynamics and promotes generation of hexasomes both with symmetrically or asymmetrically modified nucleosomes.

Usage: Research use only

<https://www.difficultpeptide.com>

H2B-K120Ub

Product Name: H2B-K34Ub

CAT.#: H2402

Description: Synthesized histone H2B peptide corresponding to residues within 1-125 of human histone H2B with monoubiquitination K120 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H2B-K120ub is a prominent histone posttranslational modification (PTM) associated with the actively transcribed genome. H2B-K120ub act as a signaling hub for several downstream biochemical processes associated with active transcriptional elongation, including lysine methylation events on histone H3, as well as binding of the histone chaperone complex, FACT.

Usage: Research use only

<https://www.difficultpeptide.com>

H3

Product Name: H3

CAT.#: H3100

Description: This product is a chemically synthesized human H3 protein composed of 135 amino acids.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone H3 is one of the five main histones involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and a long N-terminal tail, H3 is involved with the structure of the nucleosomes of the 'beads on a string' structure.

Histone proteins are highly post-translationally modified however Histone H3 is the most extensively modified of the five histones. Histone H3 is an important protein in the emerging field of epigenetics, where its sequence variants and variable modification states are thought to play a role in the dynamic and long term regulation of genes.

Usage: Research use only

<https://www.difficultpeptide.com>

H3-K4me1

Product Name: H3-K4me1

CAT.#: H3101

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with monomethylation K4 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K4me1 is an epigenetic modification to the DNA packaging protein Histone H3. It is a mark that indicates the mono-methylation at the 4th lysine residue of the histone H3 protein and often associated with gene enhancers. H3K4me1 is enriched at active and primed enhancers.

Transcriptional enhancers control the cell-identity gene expression and are important in the cell identity. Enhancers are primed by histone H3K4 mono-/di-methyltransferase MLL4 and then are activated by histone H3K27 acetyltransferase p300. H3K4me1 fine-tunes the enhancer activity and function rather than controls. H3K4me1 is put down by KMT2C (MLL3) and KMT2D (MLL4). LSD1, and the related LSD2/KDM1B demethylate H3K4me1 and H3K4me2. Marks associated with active gene transcription like H3K4me1 and H3K9me1 have very short half-lives. H3K4me1 with MLL3/4 can also act at promoters and repress genes.

Usage: <https://www.difficultpeptide.com>
Research use only

H3-K4me2

Product Name: H3-K4me2

CAT.#: H3102

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation K4 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K4me2 is a modification thought to have a role in transcriptional memory. In CD4+ T lymphocytes, H3K4Me2 is present within gene bodies regulating cellular function, but not in those of housekeeping genes, which indicates that the modification has a role in refining the tissue-specificity of expressed genes. This type of cellular identity targeting is also noted in work with human and mouse spermatozoa; the H3K4Me2 modification marks genes that are relevant in spermatogenesis. Most effects of H3K4Me2 seem to be attributed to its transcriptional activation; however, recent work also indicates that it may also play an RNA-dependent regressive role, related to the GAL-1 promoter.

<https://www.difficultpeptide.com>
Usage: Research use only

H3-K4me3

Product Name: H3-K4me3

CAT.#: H3103

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K4 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K4me3 is commonly associated with the activation of transcription of nearby genes. H3K4 trimethylation regulates gene expression through chromatin remodeling by the NURF complex. This makes the DNA in the chromatin more accessible for transcription factors, allowing the genes to be transcribed and expressed in the cell. More specifically, H3K4me3 is found to positively regulate transcription by bringing histone acetylases and nucleosome remodelling enzymes (NURF). H3K4me3 also plays an important role in the genetic regulation of stem cell potency and lineage. This is because this histone modification is more-so found in areas of the DNA that are associated with development and establishing cell identity.

<https://www.difficultpeptide.com>

Usage: Research use only

H3-K9me1

Product Name: H3-K9me1

CAT.#: H3104

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with monomethylation K9 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Monomethylation of histone H3 at lysine 9 (H3K9Me1) is found at euchromatin regions of silenced genes and is correlated with gene repression. Recognition of H3K9Me1 by the H3K9 demethylases GLP and G9a is essential to embryonic stem cell differentiation and viability in mice. Cytoplasmic localization of H3K9Me1 is associated with reduced disease-specific mortality risk in patients with oral and/or oropharyngeal squamous cell carcinoma.

Usage: Research use only

<https://www.difficultpeptide.com>

H3-K9me2

Product Name: H3-K9me2

CAT.#: H3105

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation K9 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K9me2 is strongly associated with transcriptional repression. H3K9me2 levels are higher at silent compared to active genes in a 10kb region surrounding the transcriptional start site. H3K9me2 represses gene expression both passively, by prohibiting acetylation and therefore binding of RNA polymerase or its regulatory factors, and actively, by recruiting transcriptional repressors. H3K9me2 has also been found in megabase blocks, termed Large Organised Chromatin K9 domains (LOCKS), which are primarily located within gene-sparse regions but also encompass genic and intergenic intervals. Its synthesis is catalyzed by G9a, G9a-like protein, and PRDM2. H3K9me2 can be removed by a wide range of histone lysine demethylases (KDMs) including KDM1, KDM3, KDM4 and KDM7 family members. H3K9me2 is important for various biological processes including cell lineage commitment, the reprogramming of somatic cells to induced pluripotent stem cells, regulation of the inflammatory response, and addiction to drug use.

Usage: <https://www.difficultpeptide.com>
Research use only

H3-K9me3

Product Name: H3-K9me3

CAT.#: H3106

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K9 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K9me3 is an epigenetic modification to the DNA packaging protein Histone H3. It is a mark that indicates the trimethylation at the 9th lysine residue of the histone H3 protein and is often associated with heterochromatin.

Usage: Research use only

H3-K9me3-K18Ub

Product Name: H3-K9me3-K18Ub

CAT.#: H3115

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K9 modification and monoubiquitination K18 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: DNA methylation and histone modifications are two key epigenetic mechanisms in regulating gene expression, heterochromatin assembly, and genome stability. In mammals, maintenance of DNA methylation is mainly mediated by DNA methyltransferase 1 (DNMT1) in a replication-dependent manner. The spatiotemporal regulation of DNMT1 is essential for faithful propagation of DNA methylation patterns between cell generations. H3K9me3 by the RFTS domain of DNMT1 serves to enhance the enzymatic stimulation of DNMT1 by previously characterized H3 ubiquitylation and mediates the cellular colocalization of DNMT1 and H3K9me3.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K9me3-K18Ub-K23Ub

Product Name: H3-K9me3-K18Ub-K23Ub

CAT.#: H3116

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K9 modification and monoubiquitination K18 and K23 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: The DNMT1 RFTS domain serves as an effector module that transmits the H3K9me3 signal into DNMT1-mediated DNA methylation.

DNMT1 RFTS domain binds to histone H3 ubiquitinated at lysine 14 (K14Ub), 18 (K18Ub) and/or 23 (K23Ub), with a preference for H3 with two mono-ubiquitination (H3Ub₂). Dnmt1 is inhibited by its RFTS domain, which binds the catalytic domain to the exclusion of DNA. Activation of Dnmt1 at specific times and locations is crucial for the maintenance of proper DNA methylation during cell proliferation, which ensures tissue- or cell-type-specific functions. Thus, constitutively active Dnmt1 leads to abnormal methylation patterns that affect this cell-type-specific functional differentiation. The binding of H3 doubly monoubiquitinated at K18 and K23 to RFTS leads to Dnmt1 activation through dissociation of inserted RFTS from the catalytic domain.

Usage: <https://www.difficultpeptide.com>
Research use only

H3-K27me1

Product Name: H3-K27me1

CAT.#: H3107

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with monomethylation K27 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K27me1 is linked to promotion of transcription and is seen to accumulate in transcribed genes. Histone-histone interactions play a role in this process. Regulation occurs via Setd2-dependent H3K36me3 deposition. H3K27me1 shows an inverse distribution to H3K27me3 that defines the boundaries between the TP and GRI regions and is diagnostic for constitutive heterochromatin elsewhere in the barley genome.

H3K27me1 accumulates within expressed genes and promotes transcription. Setd2-dependent H3K36me3 regulates H3K27me1 versus H3K27me2 intragenic deposition.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K27me2

Product Name: H3-K27me2

CAT.#: H3108

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation K27 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K27me2 is broadly distributed within the core histone H3 and is believed to play a protective role by inhibiting non-cell-type specific enhancers. Ultimately, this leads to the inactivation of transcription. In mouse embryonic stem cells, H3K27me2 is the dominant modification form, reaching 70%, while H3K27me1 and H3K27me3 only occupy 7 and 4% of the total H3, respectively. H3K27me3 is mainly enriched within the promoters of silenced genes; conversely, H3K27me1 and H3K27ac accumulate on transcriptionally active genes. PHF20L1 is a histone methylation reader protein, which recognizes H3K27me2 and collaborates with PRC2 and the NuRD complex in regulating H3K27 modifications to suppress a series of tumor suppressors, ultimately promoting the Warburg effect and breast tumorigenesis.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K27me3

Product Name: H3-K27me3

CAT.#: H3109

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K27 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K27me3 is often seen to interact with H3K4me3 in bivalent domains . These domains are usually found in embryonic stem cells and are pivotal for proper cell differentiation. H3K27me3 and H3K4me3 determine whether a cell will remain unspecified or will eventually differentiate. The Grb10 gene in mice makes use of these bivalent domains. Grb10 displays imprinted gene expression. Genes are expressed from one parental allele while simultaneously being silenced in the other parental allele.

Usage: Research use only

H3-K36me1

Product Name: H3-K36me1

CAT.#: H3110

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with monomethylation K36 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: The methylation of H3K36 has particularly had effects in transcriptional repression, alternative splicing, dosage compensation, DNA replication and repair, DNA methylation, and the transmission of the memory of gene expression from parents to offspring during development. set2 mutants that harbor only H3K36me1 exhibit cryptic transcription, suggesting that the main functions of H3K36me occur through H3K36me2

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K36me2

Product Name: H3-K36me2

CAT.#: H3111

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation K36 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K36me2 is an epigenetic modification to the DNA packaging protein Histone H3. It is a mark that indicates the di-methylation at the 36th lysine residue of the histone H3 protein. NSD1-mediated H3K36me2 is required for the recruitment of DNMT3A and maintenance of DNA methylation at intergenic regions.

Usage: Research use only

H3-K36me3

Product Name: H3-K36me3

CAT.#: H3112

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with trimethylation K36 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K36me3 can bind chromodomain proteins such as MSL3 hMRG15 and scEaf3. It can bind PWWP proteins such as BRPF1 DNMT3A, HDGF2 and Tudor domains such as PHF19 and PHF1. H3K36me3 is required for homologous recombinational repair of DNA damage such as double-strand breaks. The trimethylation is catalyzed by SETD2 methyltransferase. H3K36me3 acts as a mark for HDACs to bind and deacetylate the histone which would prevent run-away transcription. It is associated with both facultative and constitutive heterochromatin.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-R42me2a

Product Name: H3-R42me2a

CAT.#: H3113

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation R42 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H3R42me2a is a histone modification with positive transcriptional effects. Nucleosomes containing H3R42me2a can stimulate transcription of the associated DNA.

Usage: Research use only

H3-K79me2

Product Name: H3-K79me2

CAT.#: H3114

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with dimethylation K79 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Lysine 79 of histone H3 can be mono-, di- or trimethylated by Dot1 methylase; methylation at this residue acts as a marker of inactive chromatin regions that is critical for transcriptional silencing, and it is thought that silencing proteins such as Sir3 function by blocking Dot1 methylation. DOT1L-mediated H3K79me2 modification drives cardiomyogenesis through the definition of a specific transcriptional landscape.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K56ac

Product Name: H3-K56ac

CAT.#: H3201

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K56 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K56ac is a covalent modification known as a mark of newly replicated chromatin as well as replication-independent histone replacement. H3K56ac is important for chromatin remodeling and serves as a marker of new nucleosomes during DNA replication but its role in the cell cycle is debated. Lysine 56 is located at the amino-terminal α N-helix and close to the site where the DNA enters and exits the nucleosome. Due to its location on the lateral surface of the nucleosome, which is close to the DNA entry/exit site and interacts with DNA. The studies on yeast might not apply to the mammals. Mammalian cells do not express HATs with high specificity to K56. Sirtuins can catalyze the removal of the acetyl group from K56. H3K56ac levels are elevated in cancer and pluripotent cells. TRIM66 reads unmodified H3R2K4 and H3K56ac to respond to DNA damage.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-K18ac

Product Name: H3-K18ac

CAT.#: H3202

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K18 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Acetylation and deacetylation are posttranslational modifications (PTMs) which affect the regulation of chromatin structure and its remodeling. Acetylation of histone 3 at lysine placed on position 18 (H3K18Ac) plays an important role in driving progression of many types of cancer, including breast, colon, lung, hepatocellular, pancreatic, prostate, and thyroid cancer.

Usage: Research use only

H3-K64ac

Product Name: H3-K64ac

CAT.#: H3203

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K64 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone H3 is reported to be acetylated at Lys64 (H3K64ac) by p300 co-activator. In addition, H3K64ac is found enriched at the transcriptional start sites of active genes, consistent with a transcriptional activation modification opposite of its repressive counterpart H3K64me3.

Usage: Research use only

H3-K122ac

Product Name: H3-K122ac

CAT.#: H3204

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K122 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3K122ac can be sufficient to stimulate transcription and that mutation of H3K122 impairs transcriptional activation. H3K122ac defines genome-wide genetic elements and chromatin features associated with active transcription. H3K122ac is catalyzed by the coactivators p300/CBP and can be induced by nuclear hormone receptor signaling.

Usage: Research use only

H3-K9ac-S10ph

Product Name: H3-K9ac-S10ph

CAT.#: H32301

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K9 modification and phosphorylation S10 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K9 modification and phosphorylation S10 modification.

Usage: Research use only

H3-K56ac-K122Ub

Product Name: H3-K56ac-K122Ub

CAT.#: H32401

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with acetylation K56 modification and monoubiquitination K122 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H3 Lys56 acetylation increases the binding affinity of H3 toward two other chaperones CAF-1 and Rtt106. Meanwhile, H3 Lys56 acetylation promotes H3 Lys122 ubiquitination, which weakens the interaction between H3 and Asf1. Subsequently, Lys56 acetylation and Lys122 ubiquitination synergistically facilitate the transfer of the H3-H4 dimer from the H3-H4-Asf1 complex to other chaperones for (H3-H4)₂ tetramer formation and deposition.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-S10ph

Product Name: H3-S10ph

CAT.#: H3301

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with phosphorylation S10 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H3S10ph is important for chromosome condensation and cytokinesis during mitosis in mammals. H3S10ph is emerging as an important player in the initiation and propagation of cancer, as it facilitates cellular malignant transformation and participates in fundamental cellular functions.

Usage: Research use only
<https://www.difficultpeptide.com>

H3-T118ph

Product Name: H3-T118ph

CAT.#: H3302

Description: Synthesized histone H3 peptide corresponding to residues within 1-135 of human histone H3 with phosphorylation T118 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H3T118ph alters nucleosome dynamics and remodeling. H3T118ph dramatically decreases DNA–octamer binding, increases nucleosome sliding and increases DNA accessibility near the nucleosome dyad. H3T118ph may function to destabilize nucleosomes in vivo by regulating their mobility, disassembly and remodeling.

Usage: Research use only
<https://www.difficultpeptide.com>

H4

Product Name: H4

CAT.#: H4100

Description: This product is a chemically synthesized human H3 protein composed of 102 amino acids.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone H4 is one of the five main histone proteins involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and a long N-terminal tail, H4 is involved with the structure of the nucleosome of the 'beads on a string' organization. Histone H4 is an important protein in the structure and function of chromatin, where its sequence variants and variable modification states are thought to play a role in the dynamic and long term regulation of genes.

Usage: Research use only

H4-K20me2

Product Name: H4-K20me2

CAT.#: H4101

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with dimethylation K20 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H4K20me2 is the most common methylation state on histone H4 and was one of the earliest modified histone residues to be identified back in pea and calf extracts in 1969. It is also the only identified methylated lysine residue on the H4 histone.

Usage: Research use only

H4-K8ac

Product Name: H4-K8ac

CAT.#: H4201

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with acetylation K8 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H4K8ac, representing an epigenetic modification to the DNA packaging protein histone H4, is a mark indicating the acetylation at the 8th lysine residue of the histone H4 protein. It has been implicated in the prevalence of malaria.

Usage: Research use only

H4-K12ac

Product Name: H4-K12ac

CAT.#: H4202

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with acetylation K12 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H4K12ac is an epigenetic modification to the DNA packaging protein histone H4. It is a mark that indicates the acetylation at the 12th lysine residue of the histone H4 protein. H4K12ac is involved in learning and memory. It is possible that restoring this modification could reduce age-related decline in memory.

Usage: Research use only

H4-K16ac

Product Name: H4-K16ac

CAT.#: H4203

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with acetylation K16 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H4K16ac is an epigenetic modification to the DNA packaging protein Histone H4. It is a mark that indicates the acetylation at the 16th lysine residue of the histone H4 protein. H4K16ac is unusual in that it has both transcriptional activation AND repression activities. The loss of H4K20me3 along with a reduction of H4K16ac is a strong indicator of cancer.

Usage: Research use only

H4-K20ac

Product Name: H4-K20ac

CAT.#: H4204

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with acetylation K20 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. H4K20ac is associated with gene repression in human cells. Unlike H3K9me3, a constitutive heterochromatin mark, H4K20ac was less associated with TSSs of completely silenced genes (those with no mRNA expression), suggesting that H4K20ac may play a role in repressing transcribed genes rather than in assisting with heterochromatin formation to induce a fully silent state, possibly preventing methylation on the same residue.

Usage: Research use only

<https://www.difficultpeptide.com>

H4-K5ac

Product Name: H4-K5ac

CAT.#: H4205

Description: Synthesized histone H4 peptide corresponding to residues within 1-102 of human histone H4 with acetylation K5 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: H4K5 is acetylated by TIP60 and CBP/p300 proteins. CAP/p300 open transcriptional start site chromatin by acetylating histones. H4K5ac has also been implicated in epigenetic bookmarking which allows gene expression patterns to be faithfully passed to daughter cells through mitosis. Important cell-type specific genes are marked in some way that prevents them from being compacted during mitosis and ensures their rapid transcription. H4K5ac appears to prime activity-dependent genes expressed during learning.

Usage: Research use only

CENP A-S14ph

Product Name: CENP A-S14ph

CAT.#: C16314

Description: Synthesized peptide corresponding to residues within 1-140 of CENP A with phosphorylation S14 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: /

CENP A-S68ph

Product Name: CENP A-S68ph

CAT.#: C16368

Description: Synthesized peptide corresponding to residues within 1-140 of CENP A with phosphorylation S68 modification.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Histone modifications are associated with distinct transcription states and serve as heritable epigenetic markers for chromatin structure and function. Phosphorylation of Ser68 eliminates the binding of CENP-A to the assembly factor HJURP, thus preventing the premature loading of CENP-A to the centromere prior to mitotic exit.

Usage: Research use only

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Ubiquitins And Ubiquitin Probes

Ubiquitin

Product Name: Ubiquitin

CAT.#: U1000

Description: This product is a chemically synthesized Ubiquitin composed of 76 amino acids.

Purity: $\geq 95\%$ (HPLC)

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Ubiquitin is a small protein that exists in all eukaryotic cells. It performs its myriad functions through conjugation to a large range of target proteins. A variety of different modifications can occur. The ubiquitin protein itself consists of 76 amino acids and has a molecular mass of about 8.6 kDa. Key features include its C-terminal tail and the 7 lysine residues. It is highly conserved throughout eukaryote evolution; human and yeast ubiquitin share 96% sequence identity.

Usage: Research use only

Ub-AMC

Product Name: Ub-AMC

CAT.#: U1010

Description: Ubiquitin-AMC is prepared by the C-terminal derivatization of ubiquitin with 7-amino-4-methylcoumarin.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Introduction: Ubiquitin-AMC is a fluorogenic substrate for a wide range of deubiquitinating enzymes (DUBs), including ubiquitin C-terminal hydrolases (UCHs) and ubiquitin specific proteases (USPs). It is a particularly useful reagent for the study of deubiquitinating activity where detection sensitivity or continuous monitoring of activity is essential.

Application: Can be used for the following applications:

1. Substrate for deubiquitylating enzyme activity assays.
2. Identification/confirmation of enzyme deubiquitylation activity.
3. Investigation of deconjugating enzyme substrate specificity in comparison with alternative UBL substrates.

Usage: Research use only
<https://www.difficultpeptide.com>

Ub-ACC

Product Name: Ub-ACC

CAT.#: U1020

Description: Ubiquitin-ACC is prepared by the C-terminal derivatization of ubiquitin with 7-amino-4-carbamoylmethylcoumarin.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Ubiquitin-ACC is a fluorogenic substrate for a wide range of deubiquitinating enzymes (DUBs), including ubiquitin C-terminal hydrolases (UCHs) and ubiquitin specific proteases (USPs). It is a particularly useful reagent for the study of deubiquitinating activity where detection sensitivity or continuous monitoring of activity is essential. DUB assays using UCH-L3, OTUD2 and USP30 demonstrated that Ub-ACC shows nearly 2-fold higher sensitivity than Ub-AMC.

Usage: Research use only

Ub-Rho110

Product Name: Ub-Rho110

CAT.#: U1030

Description: Ubiquitin-Rho110 is prepared by the C-terminal derivatization of ubiquitin with rhodamine 110.

Purity: $\geq 95\%$ (HPLC)

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Compared with Ub-AMC, Ub-Rho110 has excitation and emission wavelengths ranging from 490 to 550 nm, it can effectively reduce the false positive results caused by autofluorescence of compounds.

Usage: Research use only

Ub-Prg

Product Name: Ub-Prg

CAT.#: U1040

Description: Ubiquitin-Prg is C-terminally propargylated Ub.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Ub-Prg (also called Ub-PA) can react with the active Cys of DUBs through 1,2-addition to produce a stable vinyl thioether product.

To explain regulatory mechanisms, Ub-Prg was used to capture the catalytic conformation by which RPN13DEUBAD activates UCH-L5; and the catalytic conformation that truncated INO80DEUBAD lacks to inhibit UCH-L5.

Usage: Research use only

Ub-Br2

Product Name: Ub-Br2

CAT.#: U1050

Description: Ubiquitin-Br2 is C-terminally Bromoethylated Ub.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Ub-Br2 can react with the active Cys through nucleophilic substitution. This probes exhibited distinct DUB profiling, enabling the identification of DUBs by affinity-tag based mass proteomics (AP-MS).

Usage: Research use only

Met1-Diubiquitin

Product Name: Met1-Diubiquitin

CAT.#: U2101

Description: Met1-Diubiquitin chains are manufactured using recombinant methods to avoid the potential for contaminating synthetic intermediates.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Met1-linked ubiquitin chains are key regulators of inflammation and immunity to pathogens. Met1-linked ubiquitin chains are assembled by LUBAC and are disassembled by the deubiquitinases OTULIN and CYLD. Met1-linked ubiquitin chains function as kinase scaffolds to control signalling outcomes by pattern recognition receptors and cytokine receptors. Intracellular bacteria are decorated with Met1-linked ubiquitin chains for activation of xenophagy. Pathogen-encoded effectors target the Met1-linked ubiquitin machinery to subvert host-defence responses.

Usage: Research use only
<https://www.difficultpeptide.com>

K6-Diubiquitin

Product Name: K6-Diubiquitin

CAT.#: U2201

Description: This K6 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K6 linked ubiquitin linkages are found at increased levels in response to UV radiation, indirectly associated with DNA repair, and have been identified on mitochondrial outer membrane (MOM) proteins.

Usage: Research use only

K11-Diubiquitin

Product Name: K11-Diubiquitin

CAT.#: U2301

Description: This K11 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: Lyophilized powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K11 linked polyubiquitination increase when the metazoan anaphase-promoting complex APC/C is active during mitosis, and APC/C has been shown to assemble K11-linked ubiquitin chains to drive proteasomal degradation and exit from mitosis.

Usage: Research use only

K27-Diubiquitin

Product Name: K27-Diubiquitin

CAT.#: U2401

Description: This K27 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K27-linkage poly-ubiquitination plays important roles in DNA damage repair and autoimmunity. Recently reports have emerged that place K27 chains mainly in the intracellular innate immune response pathway, where they regulate several essential infection sensors, such as STING, cGAS, MAVS, and MDA5, or effectors such as NEMO and Beclin.

Usage: Research use only

K29-Diubiquitin

Product Name: K29-Diubiquitin

CAT.#: U2501

Description: This K29 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K29 linked polyubiquitination has been shown to be an inhibitor of Wnt signaling, which plays an important role in embryogenesis, and its deregulation has been shown to play a role in tumorigenesis.

Usage: Research use only

K33-Diubiquitin

Product Name: K33-Diubiquitin

CAT.#: U2601

Description: This K33 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K33 linked diubiquitin is a useful substrate for identifying and characterizing deubiquitinating enzymes that cleave the K33 linkage and for structural and binding studies of ubiquitin chain recognition by ubiquitin-associated domains (UBA) or ubiquitin-interacting motifs (UIMs).

Usage: Research use only

K48-Diubiquitin

Product Name: K48-Diubiquitin

CAT.#: U2701

Description: This K48 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: Proteins polyubiquitinated at specific lysine residues display a tendency to be targeted for different processes. The attachment of K48-linked polyubiquitin chains to proteins is a universal signal for degradation by the proteasome.

Usage: Research use only

K63-Diubiquitin

Product Name: K63-Diubiquitin

CAT.#: U2801

Description: This K63 linked di-ubiquitin was obtained by chemical synthesis.

Purity: $\geq 95\%$ by HPLC analysis

Appearance: White powder

Stability and Storage: Shipped at 4° C. Store at +4° C short term (1-2 weeks). Upon delivery aliquot. Store at -20° C or -80° C. Avoid freeze / thaw cycle.

Application: K63-linked polyubiquitin chains exert nonproteolytic functions in vivo, such as protein trafficking, kinase/phosphatase activation, and DNA damage control, all of which might be important in regulation of cancer survival and development.

Usage: Research use only