PRODUCT INFORMATION

Histone H3K36Me3 (21-44)-GK-biotin (trifluoroacetate salt)

Item No. 27532

Formal Name: N^2-((S)-2-((S)-2-(2-(2-((2S,3R)-2-((S)-2-((S)-1-(L-alanyl-L-threonyl-L-lysyl-L-alanyl-L-alanyl-L-arginyl-L-lysyl-L-seryl-L-alanyl)pyrrolidine-2-carboxamido)propanamido)-3-hydroxybutanamido)acetamido)acetamido)-3-methylbutanamido)-6-(trimethylammonio)hexanoyl)-L-lysyl-L-prolyl-L-histidyl-L-arginyl-L-tyrosyl-L-arginyl-L-prolylglycylglycyl-N^6-(5-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanoyl)-L-lysinate, trifluoroacetate salt

Synonyms: ATKAARKSAPATGGV-K(Me3)-KPHRYRPG-GK(Biotin), Histone H3 (21-44) (Lys^{36}me3), [Lys(Me3)36]-Histone H3 (21-44)-GK(Biotin)

MF: $C_{130}H_{220}N_{44}O_{33}S \bullet XCF_3COOH$

FW: 2,959.5

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

H—Ala—Thr—Lys—Ala—Ala—Arg—Lys—Ser—Ala—Pro—
Ala—Thr—Gly—Gly—Val—Lys(Me3)—Lys—Pro—His—Arg—
Tyr—Arg—Pro—Gly—Gly—Lys(Biotin)—OH
• XCF_3COOH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Histone H3K36Me3 (21-44)-GK-biotin (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K36Me3 (21-44)-GK-biotin (trifluoroacetate salt) in water. The solubility of histone H3K36Me3 (21-44)-GK-biotin (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H3K36Me3 (21-44) is a peptide fragment of histone H3 that corresponds to amino acid residues 22-45 of the human histone H3.1 and 3.2 sequences. It is trimethylated at lysine 36 and biotinylated *via* a C-terminal GK linker. Trimethylation of H3K36 is increased in the G_1 and early S phases of the cell cycle where it binds to and recruits the mismatch recognition protein MutSα in preparation for DNA replication and mismatch repair.[1] H3K36 trimethylation is found in greater amounts on exons compared with introns in *C. elegans*, mouse, and human genome-wide maps of histone H3 tail methylations.[2]

References

1. Li, F., Mao, G., Tong, D., *et al.* The histone mark H3K36me3 regulates human DNA mismatch repair through its interaction with MutSα. *Cell* **153(3)**, 590-600 (2013).
2. Kolasinska-Zwierz, P., Down, T., Latorre, I., *et al.* Differential chromatin marking of introns and expressed exons by H3K36me3. *Nat. Genet.* **41(3)**, 376-381 (2009).

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