PRODUCT INFORMATION

Histone H3K4Me1 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27511

Formal Name: L-alanyl-L-arginyl-L-threonyl-N^6-methyl-L-lysyl-L-glutaminyl-L-threonyl-L-alanyl-L-arginyl-L-lysyl-L-seryl-L-threonylglycylglycyl-L-lysyl-L-alanyl-L-prolyl-L-arginyl-L-lysyl-L-glutaminyl-L-leucyl-L-alanine, trifluoroacetate salt

Synonyms: ART-K(Me1)-QTARKSTGGKAPRKQLA, Histone H3 (1-21) (Lys^4me1), [Lys(Me1)4]-Histone H3 (1-21)

MF: $C_{95}H_{174}N_{36}O_{28} \bullet XCF_3COOH$

FW: 2,268.7

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

H—Ala—Arg—Thr—Lys(Me1)—Gln—Thr—Ala—Arg—Lys—Ser—
Thr—Gly—Gly—Lys—Ala—Pro—Arg—Lys—Gln—Leu—Ala—OH
• XCF_3COOH

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

Laboratory Procedures

Histone H3K4Me1 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K4Me1 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K4Me1 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H3K4Me1 (1-21) is an N-terminal peptide fragment of histone H3 that corresponds to amino acid residues 2-22 of the human histone H3 sequence. Monomethylation of histone H3 at lysine 4 is found at active and primed enhancer regions of gene promoters and H3K4Me1-containing nucleosomes are more efficiently remodeled by the chromatin-remodeling complex BAF than unmarked nucleosomes.[1,2] It is also enriched at CpG sites associated with aging in stem and differentiated cells.[3]

References

1. Gupta, J., Kumar, S., Li, J., *et al.* Histone H3 lysine 4 monomethylation (H3K4me1) and H3 lysine 9 monomethylation (H3K9me1): Distribution and their association in regulating gene expression under hyperglycaemic/hyperinsulinemic conditions in 3T3 cells. *Biochimie* **94(12)**, 2656-2664 (2012).
2. Local, A., Huang, H., Albuquerque, C.P., *et al.* Identification of H3K4me1-associated proteins at mammalian enhancers. *Nat. Genet.* **50(1)**, 73-82(2017).
3. Fernández, A.F., Bayón, G.F., Urdinguio, R.G., *et al.* H3K4me1 marks DNA regions hypomethylated during aging in human stem and differentiated cells. *Genome Res.* **25(1)**, 27-40 (2015).

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