

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-glutamyl-L-threonyl-L-alanyl-L-arginyl-L-lysyl-L-seryl-L-threonylglycylglycyl-L-lysyl-L-alanyl-L-prolyl-L-arginyl-L-lysyl-L-glutamyl-L-leucyl-L-alanine, trifluoroacetate salt	
Synonyms:	ART-K(Me1)-QTARKSTGGKAPRKQLA, Histone H3 (1-21) (Lys ⁴ me1), [Lys(Me1)4]-Histone H3 (1-21)	H—Ala—Arg—Thr—Lys(Me1)—Gln—Thr—Ala—Arg—Lys—Ser— Thr—Gly—Gly—Lys—Ala—Pro—Arg—Lys—Gln—Leu—Ala—OH
MF:	C ₉₅ H ₁₇₄ N ₃₆ O ₂₈ • XCF ₃ COOH	
FW:	2,268.7	• XCF ₃ COOH
Purity:	≥95%	
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	

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

- 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).
- Local, A., Huang, H., Albuquerque, C.P., *et al.* Identification of H3K4me1-associated proteins at mammalian enhancers. *Nat. Genet.* **50(1)**, 73-82(2017).
- 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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