

# PRODUCT INFORMATION

## Histone H3K4Me2 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27512

<b>Formal Name:</b>	L-alanyl-L-arginyl-L-threonyl-N <sup>6</sup> ,N <sup>6</sup> -dimethyl-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	H—Ala—Arg—Thr—Lys(Me2)—Gln—Thr—Ala—Arg—Lys—Ser—
<b>Synonyms:</b>	ART-K(Me2)-QTARKSTGGKAPRKQLA, Histone H3 (1-21) (Lys <sup>4</sup> me2), [Lys(Me2)4]-Histone H3 (1-21)	Thr—Gly—Gly—Lys—Ala—Pro—Arg—Lys—Gln—Leu—Ala—OH • XCF <sub>3</sub> COOH
<b>MF:</b>	C <sub>96</sub> H <sub>176</sub> N <sub>36</sub> O <sub>28</sub> • XCF <sub>3</sub> COOH	
<b>FW:</b>	2,282.7	
<b>Purity:</b>	≥95%	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥4 years	

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

### Laboratory Procedures

Histone H3K4Me2 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K4Me2 (1-21) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K4Me2 (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 H3K4Me2 (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. Dimethylation of histone H3 at lysine 4 is found at active and primed, but inactive, loci.<sup>1,2</sup> It is enriched in gene promoter regions and overlaps with transcription factor binding sites. Low tumor levels of H3K4Me2 positively correlate with decreased overall and disease-free survival in pancreatic cancer patients.<sup>3</sup>

### References

1. Sims, R.J., III and Reinberg, D. Histone H3 Lys 4 methylation: Caught in a bind? *Genes Dev.* **20(20)**, 2779-2786 (2006).
2. Wang, Y., Li, X. and Hu, H. H3K4me2 reliably defines transcription factor binding regions in different cells. *Genomics* **103(2-3)**, 222-228 (2014).
3. Watanabe, T., Morinaga, S., Akaike, M., *et al.* The cellular level of histone H3 lysine 4 dimethylation correlates with response to adjuvant gemcitabine in Japanese pancreatic cancer patients treated with surgery. *Eur. J. Surg. Oncol.* **38(11)**, 1051-1057 (2012).

#### 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.

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