PRODUCT INFORMATION

Histone H3K9Me1 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27525

Formal Name: N^2-L-threonyl-L-lysyl-L-glutaminyl-L-threonyl-L-alanyl-L-arginyl-N^6-methyl-L-lysyl-L-seryl-L-threonylglycylglycyl-L-lysyl-L-alanyl-L-prolyl-L-arginine, trifluoroacetate salt

Synonyms: Histone H3 (3-17) (Lys^{9}me1), [Lys(Me1)9]-Histone H3 (3-17), TKQTAR-K(Me1)-STGGKAPR

MF: $C_{66}H_{121}N_{25}O_{21} \bullet XCF_3COOH$

FW: 1,600.8

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

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

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

Laboratory Procedures

Histone H3K9Me1 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K9Me1 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K9Me1 (3-17) (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 H3K9Me1 (3-17) is a peptide fragment of histone H3 that corresponds to amino acid residues 4-18 of the human histone H3 sequence. Monomethylation of histone H3 at lysine 9 is found at euchromatin regions of silenced genes and is correlated with gene repression.[1] Recognition of H3K9Me1 by the H3K9 demethylases GLP and G9a is essential to embryonic stem cell differentiation and viability in mice.[2] Cytoplasmic expression of H3K9Me1 is associated with reduced disease-specific mortality risk in patients with oral and/or oropharyngeal squamous cell carcinoma.[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. Liu, N., Zhang, Z., Wu, H., *et al.* Recognition of H3K9 methylation by GLP is required for efficient establishment of H3K9 methylation, rapid target gene repression, and mouse viability. *Genes Dev*. **29(4)**, 379-393 (2015).
3. Maia, L.L., Peterle, G.T., Dos Santos, M., *et al.* JMJD1A, H3K9me1, H3K9me2 and ADM expression as prognostic markers in oral and oropharyngeal squamous cell carcinoma. *PLoS One* **13(3)**, e019884 (2018).

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