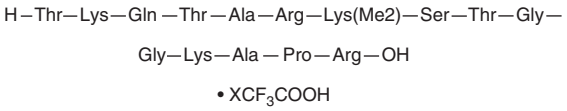
PRODUCT INFORMATION

Histone H3K9Me2 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27526

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

Synonyms: Histone H3 (3-17) (Lys^{9}me2), H-Thr-Lys-Gln-Thr-Ala-Arg-Lys(Me2)-Ser-Thr-Gly-Gly-Lys-Ala-Pro-Arg-OH, [Lys(Me2)9]-Histone H3 (3-17), TKQTAR-K(Me2)-STGGKAPR



MF: $C_{67}H_{123}N_{25}O_{21} \bullet XCF_3COOH$

FW: 1,614.9

Purity: ≥95%

Supplied as: A solid

Storage: -20

Stability: ≥4 years

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

Laboratory Procedures

Histone H3K9Me2 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K9Me2 (3-17) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K9Me2 (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 H3K9Me2 (3-17) is a peptide fragment of histone H3 that corresponds to amino acid residues 4-18 of the human histone H3 sequence. Dimethylation of histone H3 at lysine 9 is associated with transcriptional repression.[1] Heterochromatin protein 1-α (HP1-α), HP1-β, and HP1-γ selectively bind histone H3 N-terminal peptides containing dimethylated lysine 9 over unmodified lysine 9.[2] In mouse embryos, maternal chromatin containing H3K9Me2 is bound by PGC7, which preserves DNA methylation and protects 5-methylcytosine from conversion to 5-hydroxymethylcytosine.[3]

References

1. Lienert, F., Mohn, F., Tiwari, V.K., *et al.* Genomic prevalence of heterochromatic H3K9me2 and transcription do not discriminate pluripotent from terminally differentiated cells. *PLoS Genet.* **7(6)**, e1002090 (2011).
2. Lachner, M., O'Carroll, D., Rea, S., *et al.* Methylation of histone H3 lysine 9 creates a binding site for HP1 proteins. *Nature* **410(6824)**, 116-120 (2001).
3. Nakamura, T., Liu, Y.-J., Nakashima, H., *et al.* PGC7 binds histone H3K9me2 to protect against conversion of 5mC to 5hmC in early embryos. *Nature* **486(7403)**, 415-419 (2012).

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