

PRODUCT INFORMATION



Histone H4R3Me2s (1-21)-GGK-biotin (trifluoroacetate salt)

Item No. 28192

Formal Name:	N ² -(N ² -acetyl-L-serylglycyl-N ^ω ,N ^{ω'} -dimethyl-L-arginylglycyl-L-lysylglycylglycyl-L-lysylglycyl-L-leucylglycyl-L-lysylglycylglycyl-L-alanyl-L-lysyl-L-arginyl-L-histidyl-L-arginyl-L-lysyl-L-valylglycylglycyl)-N ⁶ -(5-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanoyl)-L-lysine, trifluoroacetate salt	Ac-Ser-Gly-Arg(Me2s)-Gly-Lys-Gly-Gly-Lys-Gly-Leu-Gly-Lys-Gly-Gly-Ala-Lys-Arg-His-Arg-Lys-Val-Gly-Gly-Lys(Biotin)-OH
Synonyms:	Ac-SG-R(me2s)-GKGGKGLGKGGAKRHRKV-GGK(Biotin), [Arg(Me2s)3]-Histone H4 (1-21)-GGK(Biotin), Histone H4 (1-21) (Arg ³ me2s)	• XCF ₃ COOH
MF:	C ₁₁₁ H ₁₉₇ N ₄₃ O ₂₉ S • XCF ₃ COOH	
FW:	2,630.1	
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 H4R3Me2s (1-21)-GGK-biotin (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H4R3Me2s (1-21)-GGK-biotin (trifluoroacetate salt) in water. The solubility of histone H4R3Me2s (1-21)-GGK-biotin (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H4R3Me2s (1-21)-GGK-biotin is a peptide fragment of histone H4 that corresponds to amino acid residues 2-22 of the human H4 sequence. It is symmetrically dimethylated at arginine 3 and biotinylated via a C-terminal GGK linker. Symmetric dimethylation of histone 4 at arginine 3 is associated with transcriptional repression.¹ It can recruit the DNA methyltransferase DNMT3a, leading to DNA methylation and further transcriptional repression. Histone H4R3Me2s (1-21)-GGK-biotin has been used as a substrate for the qualitative measurement of jumonji domain containing 1B (JMJD1B) arginine demethylase activity and in dot blot assays to verify antibody specificity.²

References

1. Blanc, R.S. and Richard, S. Arginine methylation: The coming of age. *Mol. Cell* **65**(1), 8-24 (2017).
2. Li, S., Ali, S., Duan, X., et al. JMJD1B demethylates H4R3me2s and H3K9me2 to facilitate gene expression for development of hematopoietic stem and progenitor cells. *Cell Rep.* **23**(2), 389-403 (2018).

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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