

PRODUCT INFORMATION

Histone H3K14Ac (1-19) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27496

Formal Name:	L-alanyl-L-arginyl-L-threonyl-L-lysyl-L-glutamyl-L-threonyl-L-alanyl-L-arginyl-L-lysyl-L-seryl-L-threonylglycylglycyl-N ⁶ -acetyl-L-lysyl-L-alanyl-L-prolyl-L-arginyl-L-lysyl-L-glutamine, trifluoroacetate salt	H—Ala—Arg—Thr—Lys—Gln—Thr—Ala—Arg—Lys—Ser— Thr—Gly—Gly—Lys(Ac)—Ala—Pro—Arg—Lys—Gln—OH
Synonyms:	ARTKQTARKSTGG-K(Ac)-APRKQ, [Lys(Ac)14]-Histone H3 (1-19), Histone H3 (Lys ¹⁴ ac)	• XCF ₃ COOH
MF:	C ₈₇ H ₁₅₈ N ₃₄ O ₂₇ • XCF ₃ COOH	
FW:	2,112.4	
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 H3K14Ac (1-19) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K14Ac (1-19) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K14Ac (1-19) (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 H3K14Ac (1-19) is a peptide fragment of histone H3 that corresponds to amino acid residues 2-20 of the human histone H3 sequence. Acetylation of H3K14 is associated with transcriptional activation and is required for trimethylation of H3K4.¹⁻³ Histone H3K14Ac (1-19) has been used to determine substrate specificity of yeast Hst2 and human SIRT2, which are Silent information regular 2 (Sir2) family enzymes.⁴

References

- Gatta, R. and Mantovani, R. Single nucleosome ChIPs identify an extensive switch of acetyl marks on cell cycle promoters. *Cell Cycle* **9(11)**, 2149-2159 (2010).
- Keating, S.T., van Diepen, J.A., Risken, N.P., *et al.* Epigenetics in diabetic nephropathy, immunity and metabolism. *Diabetologia* **61(1)**, 6-20 (2018).
- Nakanishi, S., Sanderson, B.W., Delventhal, K.M., *et al.* A comprehensive library of histone mutants identifies nucleosomal residues required for H3K4 methylation. *Nat. Struct. Mol. Biol.* **15(8)**, 881-888 (2008).
- Borra, M.T., Langer, M.R., Slama, J.T., *et al.* Substrate specificity and kinetic mechanism of the Sir2 family of NAD⁺-dependent histone/protein deacetylases. *Biochemistry* **43(30)**, 9877-9887 (2004).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM