

PRODUCT INFORMATION



Histone H3 (21-44)-GK-biotin amide (trifluoroacetate salt)

Item No. 27762

Formal Name:	L-alanyl-L-threonyl-L-lysyl-L-alanyl-L-alanyl-L-arginyl-L-lysyl-L-seryl-L-alanyl-L-prolyl-L-seryl-L-threonylglycylglycyl-L-valyl-L-lysyl-L-lysyl-L-prolyl-L-histidyl-L-arginyl-L-tyrosyl-L-arginyl-L-prolylglycylglycyl-L-lysine-biotin amide, trifluoroacetate salt	H—Ala—Thr—Lys—Ala—Ala—Arg—Lys—Ser—Ala—Pro—Ser—Thr—Gly—Gly—Val—Lys—Lys—Pro—His—Arg—Tyr—Arg—Pro—Gly—Gly—Lys(Biotin)—NH ₂
Synonyms:	ATKAARKSAPSTGGVKKPHRYRPG-GK(Biotin)-NH ₂ , Histone H3 (21-44)	
MF:	C ₁₂₇ H ₂₁₅ N ₄₅ O ₃₃ S • XCF ₃ COOH	
FW:	2,932.4	
Purity:	≥95%	• XCF ₃ COOH
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 H3 (21-44)-GK-biotin amide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3 (21-44)-GK-biotin amide (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H3 (21-44)-GK-biotin is a peptide fragment of histone H3 that corresponds to amino acid residues 22-45 of the human histone H3.3 sequence and is biotinylated *via* a C-terminal GK linker. Unlike histone H3.1 and H3.2, the histone H3.3 variant contains a serine residue at position 31 that is phosphorylated during late prometaphase and metaphase of mitosis.¹ Histone H3 (21-44) also contains lysine residues at positions 23, 27, and 36 that are subject to methylation and acetylation, all of which have a role in the regulation of gene expression, and a serine residue at position 28 that is subject to phosphorylation during mitosis.¹⁻³

References

1. Hake, S.B., Garcia, B.A., Kauer, M., *et al.* Serine 31 phosphorylation of histone variant H3.3 is specific to regions bordering centromeres in metaphase chromosomes. *Proc. Natl. Acad. Sci. U.S.A.* **102**(18), 6344-6349 (2005).
2. Bhaumik, S.R., Smith, E., and Shilatifard, A. Covalent modifications of histones during development and disease pathogenesis. *Nat. Struct. Mol. Biol.* **14**(11), 1008-1016 (2007).
3. Garcia, B.A., Hake, S.B., Diaz, R.L., *et al.* Organismal differences in post-translational modifications in histones H3 and H4. *J. Biol. Chem.* **282**(10), 7641-7655 (2007).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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