

PRODUCT INFORMATION



Histone H3 (Citrullinated R26) (21-44)-GGK-biotin Peptide (trifluoroacetate salt)

Item No. 27769

Synonyms:	ATKAA-Cit-KSAPATGGVKKPHRYRPG-GGK(Biotin), H3R26Cit, Histone H3 (21-44) (Arg ²⁶ cit), [Cit26]-Histone H3 (21-44)-GGK(Biotin)	H—Ala—Thr—Lys—Ala—Ala—Cit—Lys—Ser—Ala—Pro— Ala—Thr—Gly—Gly—Val—Lys—Lys—Pro—His—Arg— Tyr—Arg—Pro—Gly—Gly—Gly—Lys(Biotin)—OH
MF:	C ₁₂₉ H ₂₁₆ N ₄₄ O ₃₅ S • XCF ₃ COOH	
FW:	2,975.5	
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 (citrullinated R26) (21-44)-GGK-biotin peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3 (citrullinated R26) (21-44)-GGK-biotin peptide (trifluoroacetate salt) in water. The solubility of histone H3 (citrullinated R26) (21-44)-GGK-biotin peptide (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H3 (citrullinated R26) (21-44)-GGK-biotin is a peptide fragment of histone H3 that corresponds to amino acid residues 22-45 of the human H3.1 and H3.2 sequences. It is citrullinated at arginine 26 and biotinylated via a C-terminal GGK linker. Citrullination of histone H3 at arginine 26 occurs via deimination of the arginine residue by protein arginine deiminase 2 (PAD2) or PAD4 and is associated with transcriptional activation.¹⁻³ It inhibits methylation of H3K27 and is elevated in bone marrow mesenchymal stem cells (BMMSCs) derived from patients with monoclonal gammopathy of undetermined significance (MGUS) or multiple myeloma.^{1,2}

References

1. Clancy, K.W., Russell, A.-M., Subramanian, V., *et al.* Citrullination/methylation crosstalk on histone H3 regulates ER-target gene transcription. *ACS Chem. Biol.* **12**(6), 1691-1702 (2017).
2. McNee, G., Eales, K.L., Wei, W., *et al.* Citrullination of histone H3 drives IL-6 production by bone marrow mesenchymal stem cells in MGUS and multiple myeloma. *Leukemia* **31**(2), 373-381 (2017).
3. Fuhrmann, J. and Thompson, P.R. Protein arginine methylation and citrullination in epigenetic regulation. *ACS Chem. Biol.* **11**(3), 654-668 (2016).

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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