

PRODUCT INFORMATION



Histone H3K36Me3 (31-41) (trifluoroacetate salt)

Item No. 28145

Formal Name:	L-seryl-L-threonyl-L-glycyl-L-glycyl-L-valyl-L-6-(trimethylammonio)-L-norlysyl-L-prolyl-L-histidyl-L-arginine, trifluoroacetate salt
Synonyms:	Histone H3 (31-41) (Lys ³⁶ me3), [Lys(Me3)36]-Histone H3 (31-41), STGGV-K(Me3)-KPHRY H-Ser-Thr-Gly-Gly-Val-Lys(Me3)-Lys-Pro-His-Arg-Tyr-OH
MF:	C ₅₇ H ₉₄ N ₁₈ O ₁₅ • XCF ₃ COOH
FW:	1,271.5 • XCF ₃ COOH
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 H3K36Me3 (31-41) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K36Me3 (31-41) (trifluoroacetate salt) in water. The solubility of histone H3K36Me3 (31-41) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histone H3K36Me3 (31-41) is a peptide fragment of histone H3 that corresponds to amino acid residues 32-42 of the human histone H3.3 sequence. 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 Trimethylation of H3K36 is increased in the G₁ and early S phases of the cell cycle where it binds to and recruits the mismatch recognition protein MutSa in preparation for DNA replication and mismatch repair.² H3K36 trimethylation is found in greater amounts on exons compared with introns in *C. elegans*, mouse, and human genome-wide maps of histone H3 tail methylations.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. Li, F., Mao, G., Tong, D., *et al.* The histone mark H3K36me3 regulates human DNA mismatch repair through its interaction with MutSa. *Cell* **153**(3), 590-600 (2013).
3. Kolasinska-Zwierz, P., Down, T., Latorre, I., *et al.* Differential chromatin marking of introns and expressed exons by H3K36me3. *Nat. Genet.* **41**(3), 376-381 (2009).

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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