

# PRODUCT INFORMATION



## Histone H3K4Me3 (1-10) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt)

Item No. 27493

**Formal Name:** L-alanyl-L-arginyl-L-threonyl-6-(trimethylammonio)-L-norleucyl-L-glutamyl-L-threonyl-L-alanyl-L-arginyl-L-lysyl-L-serine, trifluoroacetate salt

**Synonyms:** ART-K(Me3)-QTARKS, H-Ala-Arg-Thr-Lys(Me3)-Gln-Thr-Ala-Arg-Lys-Ser-OH, Histone H3 (1-10) (Lys<sup>4</sup>me3), [Lys(Me3)4]-Histone H3 (1-10)

H—Ala—Arg—Thr—Lys(Me3)—Gln—Thr—Ala—Arg—Lys—Ser—OH

**MF:** C<sub>49</sub>H<sub>93</sub>N<sub>19</sub>O<sub>15</sub> • XCF<sub>3</sub>COOH

• XCF<sub>3</sub>COOH

**FW:** 1,188.4

**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 H3K4Me3 (1-10) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the histone H3K4Me3 (1-10) (human, mouse, rat, porcine, bovine) (trifluoroacetate salt) in water. The solubility of histone H3K4Me3 (1-10) (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 H3K4Me3 (1-10) is an N-terminal peptide fragment of histone H3 that corresponds to amino acid residues 2-11 of the human histone H3 sequence. Trimethylation of histone H3 at lysine 4 is found in euchromatic promoter regions and is associated with active transcription.<sup>1</sup> It inhibits several H3K9 methyltransferases and has differential effects on the activities of the KDM7 demethylases PHF8 and KDM7A, activating and inhibiting H3K9Me3 demethylation, respectively. Mislocalization of H3K4Me3 is associated with disease progression and memory deficits in Alzheimer's disease.<sup>2</sup>

### References

1. Pack, L.R., Yamamoto, K.R., and Fujimori, D.G. Opposing chromatin signals direct and regulate the activity of lysine demethylase 4C (KDM4C). *J. Biol. Chem.* **291**(12), 6060-6070 (2016).
2. Mastroeni, D., Delvaux, E., Nolz, J., et al. Aberrant intracellular localization of H3k4me3 demonstrates an early epigenetic phenomenon in Alzheimer's disease. *Neurobiol. Aging* **36**(12), 3121-3129 (2015).

#### 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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