

Product Data Sheet

Product Name: Histone H3K4Me3 (1-25) amide (human mouse, rat, porcine, bovine) (trifluoroacetate salt)
 Cat. No.: GC45480

Chemical Properties

Cas. No.

Formula C₁₁₃H₂₀₉N₄₂O₃₂.XCF₃COOH M.Wt 2668.1

Solubility Water: 1 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

$$\begin{array}{c}
 \text{H} - \text{Ala} - \text{Arg} - \text{Thr} - \text{Lys}(\text{Me}_3) - \text{Gln} - \text{Thr} - \text{Ala} - \text{Arg} - \text{Lys} - \text{Ser} - \\
 \text{Thr} - \text{Gly} - \text{Gly} - \text{Lys} - \text{Ala} - \text{Pro} - \text{Arg} - \text{Lys} - \text{Gln} - \text{Leu} - \\
 \text{Ala} - \text{Thr} - \text{Lys} - \text{Ala} - \text{Ala} - \text{NH}_2 \\
 \bullet \text{XCF}_3\text{COOH}
 \end{array}$$

Background

Histone H3K4Me3 (1-25) amide is an N-terminal peptide fragment of histone H3 that corresponds to amino acid residues 2-26 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.¹ 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 patients with Alzheimer's disease.²

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).

Caution: Product has not been fully validated for medical applications. For research use only.

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