

Product Data Sheet

Product Name: Histone H3K14Ac/H3K23Ac (1-24)-GGK-biotin (trifluoroacetate salt)

Cat. No.: GC45476

Chemical Properties

Cas. No.

Formula C₁₃₁H₂₃₂N₄₆O₃₉S.XCF₃COOH M.Wt 3107.6

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

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

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

Structure

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

Background

Histone H3K14Ac/H3K23Ac (1-24)-GGK-biotin is a peptide fragment of histone H3 that corresponds to amino acid residues 2-25 of the human histone H3 sequence. It is acetylated at lysine 14 and lysine 23 and biotinylated via a C-terminal GGK linker. Acetylation of H3K14 or H3K23 is associated with transcriptional activation and H3K14 acetylation is required for trimethylation of H3K4.1,2 H3K23 acetylation is decreased in wild-type but increased in uninephrectomized db/db mouse kidney.3

References

1. Keating, S.T., van Diepen, J.A., Risken, N.P., et al. Epigenetics in diabetic nephropathy, immunity and metabolism. *Diabetologia* 61(1), 6-20 (2018).
2. Nakanishi, S., Sanderson, B.W., Delventhal, K.M., et al. A comprehensive library of histone mutants identifies nucleosomal residues required for H3K4 methylation. *Nat. Struct. Mol. Biol.* 15(8), 881-888 (2008).
3. Sayyed, S.G., Gaikwad, A.B., Lichtnekert, J., et al. Progressive glomerulosclerosis in type 2 diabetes is associated with renal histone H3K9 and H3K23 acetylation, H3K4 dimethylation and phosphorylation at serine 10. *Nephrol. Dial. Transplant.* 25(6), 1811-1817 (2010).

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

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