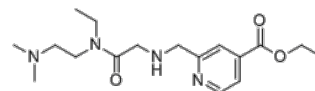


Product Name	: KDM5-C70
Cat. No.	: PC-62293
CAS No.	: 1596348-32-1
Molecular Formula	: C ₁₇ H ₂₈ N ₄ O ₃
Molecular Weight	: 336.43
Target	: Histone Demethylase
Solubility	: 10 mM in DMSO



Biological Activity

KDM5-C70 (GS-5801) is a cell-permeable derivative of KDM5-C49 (GS-080), potent, selective and cell permeable KDM5 inhibitor with IC₅₀ of 0.3, 0.3 and 0.58 μ M for KDM5A, B and C, respectively.

KDM5-C70 (GS-5801) significantly increases global levels of H3K4me₃, while having little impact on H3K4me₂/me₁, or modifications regulated by other histone lysine demethylases, such as H3K27me₃ (substrate for the KDM6 family) and H3K9me₃/H3K36me₃ (substrates for the KDM4 family).

KDM5-C70 (GS-5801) inhibits HBV RNA (EC₅₀=0.16 μ M), DNA (EC₅₀=0.24 μ M), and antigens (secreted HBsAg EC₅₀=0.14 μ M) in primary human hepatocytes.

GS-5801 exhibits antiviral activity across HBV genotypes.

GS-080 is a potent and selective inhibitor of KDM5 with IC₅₀ of 0.36 nM against KDM5A and 0.38 nM against KDM5B, respectively, displays 13-fold selectivity for KDM5A and KDM5B over members of the KDM4 family of enzymes, > 1,100- to > 278,000-fold over members of the other KDM enzyme families.

GS-5801 (10 μ M) causes sustained HBV antigen suppression in primary human hepatocytes (PHH).

GS-5801 causes global increases in H3K4me₃:H3 that precede antiviral activity, influences host and viral gene transcription.

GS-5801 is liver-targeted in nonclinical species and preferentially increases H3K4me₃:H3 levels in the liver.

GS-5801 demonstrates antiviral activity in a PHH model of HBV infection that correlates with increases in global cellular H3K4me₃:H3 ratio, but no antiviral activity is seen in the humanized mouse model of HBV infection.

References

Johansson C, et. *Nat Chem Biol*. 2016 Jul;12(7):539-45.

Horton JR, et al. *Cell Chem Biol*. 2016 Jul 21;23(7):769-81.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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