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## Product Data Sheet

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Product Name: CBB1007

Cat. No.: GC14151

### Chemical Properties

Cas. No. 1379573-92-8

Chemical Name methyl 3-(4-(4-carbamimidoylbenzoyl)piperazine-1-carbonyl)-5-((4-carbamimidoylpiperazin-1-yl)methyl)benzoate

SMILES COC(C1=CC(CN2CCN(C(N)=N)CC2)=CC(C(N3CCN(C(C4=CC=C(C(N)=N)C=C4)=O)CC3)=O)=C1)=OFormula C<sub>27</sub>H<sub>34</sub>N<sub>8</sub>O<sub>4</sub>

M.Wt

534.61

Solubility Soluble in DMSO

Storage

Store at -20°C

General For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath tips 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 

### Background

CBB1007 is an inhibitor of histone demethylase LSD1 with IC<sub>50</sub> values of 5.27 μM [1].

LSD1 is a member of the FAD-dependent amine oxidase family. It converts di-methylated H3K4 to mono- and un-methylated H3K4 and suppresses gene expression. As an inhibitor of LSD1, CBB1007 is developed to understand the function of the enzyme. In the in vitro assay, CBB1007 shows highly potent inhibitory activity with IC<sub>50</sub> value of 5.27 μM. It is specific against LSD1 and has no effect on other histone demethylases including LSD2 and JARID1A. In the mouse F9 embryonic teratocarcinoma cells, CBB1007 cause a reproducible increase of mono- and di-methylated H3K4 with IC<sub>50</sub> value of 1 μM-5 μM. It also activates the expression of CHRM4 and SCN3A which are the target genes of LSD1. The inhibition of LSD1 results in the growth inhibition of these cells. Furthermore, CBB1007 is found to inhibit the proliferation of other pluripotent cancer cells as well as the embryonic stem cells that express the stem cell markers Oct4 and Sox2 [1].

### References:

[1] Wang J, Lu F, Ren Q, et al. Novel histone demethylase LSD1 inhibitors selectively target cancer cells with pluripotent stem cell properties. Cancer research, 2011, 71(23): 7238-7249.

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

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