
Product Data Sheet

Product Name: Lysine-specific Demethylase Inhibitor (1C)

Cat. No.: GC13534

Chemical Properties

Cas. No. 927019-63-4

Chemical Name N,N'-dimethyl-15-(methylimino)-2,6,10,14,16-pentaazaheptadecanimidamide

SMILES CN/C(NCCCNCNCCCN/C(NC)=N/C)=N\CFormula $C_{15}H_{36}N_8$ M.Wt 328.5

Solubility Soluble in DMSO 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 **Background**

Lysine-specific Demethylase Inhibitor (1C) is a lysine-specific demethylase inhibitor.

Lysine-specific demethylase 1 (LSD1) is the first of several protein lysine demethylases identified. Through a FAD-dependent oxidative reaction, LSD1 could specifically remove histone H3K4me2 to H3K4me1 or H3K4me0. When forming a complex with androgen receptor, LSD1 alters its substrates to H3K9me2. The LSD1 complex regulates a coordinated histone modification switch via enzymatic activities and histone modification readers.

In vitro: Lysine-specific Demethylase Inhibitor (1C) was identified as a bisguanidine polyamine analogue exhibiting noncompetitive and specific LSD1 inhibition, with 14.1% in vitro LSD1 activity at 10 μM. Lysine-specific Demethylase Inhibitor (1C) at 0.25 μM to 10 μM could significantly and dose-dependently increase methylation at the histone 3 lysine 4 chromatin mark, H3K4me1 and H3K4me2, without affecting global H3K9me2 levels in HCT116 human colon carcinoma cells. Lysine-specific Demethylase Inhibitor

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

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(1C) could also induce expression of several epigenetically silenced genes, such as SFRP1, SFRP4, SFRP5, and GATA5, particularly in the case of SFRP4 and SFRP5 [1].

In vivo: Currently, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:

[1] Sharma SK, Wu Y, Steinbergs N, Crowley ML, Hanson AS, Casero RA, Woster PM. (Bis)urea and (bis)thiourea inhibitors of lysine-specific demethylase 1 as epigenetic modulators. *J Med Chem.* 2010 Jul 22;53(14):5197-212.

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