

Product Data Sheet

Product Name: MS67
Cat. No.: GC64295

Chemical Properties

Cas. No. 2407452-77-9

Formula C₅₂H₅₉F₄N₉O₇S

M.Wt 1030.14

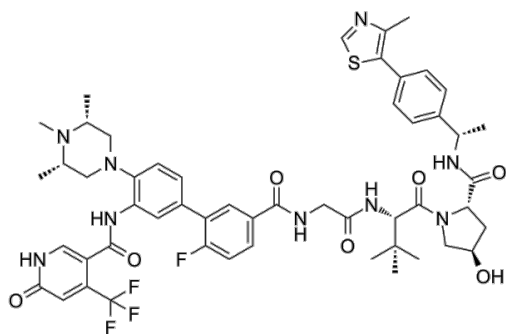
Solubility

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

MS67 is a potent and selective WD40 repeat domain protein 5 (WDR5) degrader with a K_d of 63 nM. MS67 is inactive against other protein methyltransferases, kinases, GPCRs, ion channels, and transporters. MS67 shows potent anticancer effects[1].

MS67 (0.001-1 μM) induces WDR5 degradation at a concentration as low as 1 nM. MS67 induces WDR5 depletion much more effectively in all six mixed lineage leukemia (MLL)-r acute myeloid leukemia (AML) and four pancreatic ductal adenocarcinoma (PDAC) cell lines without a hook effect and in a concentration-dependent manner in PDAC cells[1]. MS67 decreases H3K4me_{2/3} in both

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

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MV4;11 and MIA PaCa-2 cells, whereas other examined histone methylation marks such as H3K9me3, H3K27me3, and H3K36me3 are not affected. MS67 is effective in suppressing both WDR5-related gene expression programs and WDR5/MLL-induced H3K4 methylations on chromatin[1]. The GI50 values of MS67 in the two most sensitive AML lines, MV4;11 and EOL-1, are 15 nM and 38 nM, respectively. MLL-r acute leukemia cell lines including MV4;11, EOL-1, MOLM13, KOPN8, RS4;11, and THP-1 are sensitive to MS67, whereas leukemia cell lines that did not harbor MLL-r (including K562, HL60, and a murine AML line transformed by Hoxa9 plus Meis1) are insensitive to MS67[1]. MS67 binds to VCB (VHL-Elongin C-Elongin B ternary complex), with a Kd of 140 nM[1].

MS67 (75 mg/kg; i.p.; twice daily; 5 days a week; for 20 days) significantly inhibits tumor growth in vivo and prolongs survival of the treated mice[1]. After a single intraperitoneal (i.p.) injection of MS67 at a dose of 75 mg/kg, the Cmax reached at about 4.2 µM, and the concentration of MS67 retained above 0.5 µM over 12 hours[1].

[1]. Xufen Yu, et al. A selective WDR5 degrader inhibits acute myeloid leukemia in patient-derived mouse models. *Sci Transl Med.* 2021 Sep 29;13(613):eabj1578.

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