# Product Data Sheet

Product Name: Bomedemstat ditosylate
Cat. No.: GC67921

## Chemical Properties

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|---|---|---|---|
| Cas. No. | 1990504-72-7 | | |
| Formula | $C_{42}H_{50}FN_7O_8S_2$ | M.Wt | 864.02 |
| Solubility | DMSO : 100 mg/mL (115.74 mM; Need ultrasonic) | Storage | 4°C, away from moisture |
| General tips | For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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 | Bomedemstat ditosylate | | |

## Background

Bomedemstat (IMG-7289) ditosylate is an orally active and irreversible **lysine-specific demethylase 1** (**LSD1**) inhibitor. Bomedemstat ditosylate can increase H3K4 and H3K9 methylation, and then alter gene expression. Bomedemstat ditosylate shows anti-cancer activities, inhibits cancer cell proliferation and induces apoptosis[1][2].

Bomedemstat selectively inhibits proliferation and induces apoptosis of $Jak2^{V617F}$ cells by concomitantly increasing expression and methylation of p53[1].
Bomedemstat (50 nM-1 μM; 96 h) enhances survival, induces apoptosis via BCL-XL and PUMA in a TP53-dependent manner, and leads to cell cycle arrest[1].

Apoptosis Analysis[1]

Cell Line: SET-2 cells

Concentration: 50 nM, 100 nM, and 1 μM


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| Incubation Time: | 96 hours |
| Result: | Decreased levels of the antiapoptotic protein BCL-XL and increased levels of the pro-apoptotic protein PUMA. |

Bomedemstat treatment (oral gavage; 45 mg/kg; once daily; 56 d) normalizes or improves blood cell counts, reduces spleen volumes, restores normal splenic architecture, and reduces bone marrow fibrosis[1].

| | |
|---|---|
| Animal Model: | *Mx-Jak2*$^{V617F}$ mice[1] |
| Dosage: | 45 mg/kg |
| Administration: | Oral gavage; 45 mg/kg; once daily; 56 days |
| Result: | Reduced splenomegaly significantly with a few treated mice normalizing their spleen weight, the 56-day course led to partial restoration of lymph follicles and spleen architecture by histological examination. |

[1]. Jonas S Jutzi,et al. LSD1 Inhibition Prolongs Survival in Mouse Models of MPN by Selectively Targeting the Disease Clone. Hemasphere.2018 Jun 8;2(3):e54.
[2]. Yuan Fang, et al. LSD1/KDM1A inhibitors in clinical trials: advances and prospects. J Hematol Oncol. 2019 Dec 4;12(1):129.


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