

MDL-800

## Chemical Properties

CAS No. : 2275619-53-7

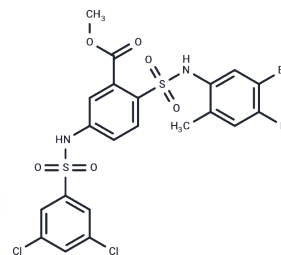
Formula: C<sub>21</sub>H<sub>16</sub>BrCl<sub>2</sub>FN<sub>2</sub>O<sub>6</sub>S<sub>2</sub>

Molecular Weight: 626.3

Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	MDL-800 is a SIRT6 modulator with antitumor activity for the study of hepatocellular carcinoma and non-small cell lung cancer.
Targets(IC50)	Sirtuin
In vitro	MDL-800 increased SIRT6 deacetylase activity with an EC <sub>50</sub> value of 11.0 ± 0.3 μM; MDL-800 (10-50 μM) induced dose-dependent deacetylation of histone H3 in 12 NSCLC cell lines. Treatment with MDL-800 dose dependently inhibited the proliferation of 12 NSCLC cell lines with IC <sub>50</sub> values ranging from 21.5 to 34.5 μM. The antiproliferation effect of MDL-800 was significantly diminished by SIRT6 knockout. Treatment with MDL-800 induced remarkable cell cycle arrest at the G <sub>0</sub> /G <sub>1</sub> phase in NSCLC HCC827 and PC9 cells. Furthermore, MDL-800 (25, 50 μM) enhanced the antiproliferation of epidermal growth factor receptor tyrosine kinase inhibitors (EGFR-TKIs) in osimertinib-resistant HCC827 and PC9 cells as well as in patient-derived primary tumor cells, and suppressed mitogen-activated protein kinase (MAPK) pathway.[1]
In vivo	In HCC827 cell-derived xenograft nude mice, intraperitoneal administration of MDL-800 (80 mg · kg <sup>-1</sup> · d <sup>-1</sup> , for 14 days) markedly suppressed the tumor growth, accompanied by enhanced SIRT6-dependent histone H3 deacetylation and decreased p-MEK and p-ERK in tumor tissues.[1]

## Solubility Information

Solubility	DMSO: 120 mg/mL (191.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.5967 mL	7.9834 mL	15.9668 mL
5 mM	0.3193 mL	1.5967 mL	3.1934 mL
10 mM	0.1597 mL	0.7983 mL	1.5967 mL
50 mM	0.0319 mL	0.1597 mL	0.3193 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Shang JL, et al. MDL-800, an allosteric activator of SIRT6, suppresses proliferation and enhances EGFR-TKIs therapy in non-small cell lung cancer. *Acta Pharmacol Sin.* 2021 Jan;42(1):120-131.

Jiang X, et al. MDL-800, the SIRT6 Activator, Suppresses Inflammation via the NF- $\kappa$ B Pathway and Promotes Angiogenesis to Accelerate Cutaneous Wound Healing in Mice. *Oxid Med Cell Longev.* 2022 Apr 27;2022:1619651.

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