MALT1 inhibitor MI-2

Cat. No.: HY-12276

CAS No.: 1047953-91-2

Molecular Formula: $C_{19}H_{17}Cl_3N_4O_3$

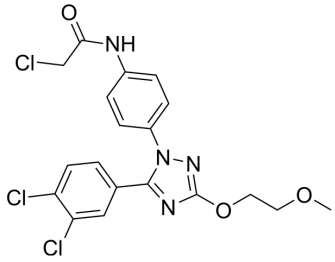
Molecular Weight: 455.72

Target: MALT1

Pathway: Metabolic Enzyme/Protease; NF-κB

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 46 mg/mL (100.94 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1943 mL	10.9716 mL	21.9433 mL
	5 mM	0.4389 mL	2.1943 mL	4.3887 mL
	10 mM	0.2194 mL	1.0972 mL	2.1943 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.49 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MALT1 inhibitor MI-2 is a MALT1 inhibitor (IC_{50}=5.84 μM). MALT1 inhibitor MI-2 binds directly to MALT1, irreversibly suppresses protease function and is accompanied by NF-κB reporter activity suppression, c-REL nuclear localization inhibition, and NF-κB target gene downregulation. MALT1 inhibitor MI-2 shows nontoxic to animals[1].

IC_{50} & Target

IC50: 5.84 μM (MALT1)[1]

In Vitro

MALT1 inhibitor MI-2 (1-1000 nM; 48 hours) selectively suppresses MALT1-dependent DLBCL cell lines, and the GI_{50} in HBL-1, TMD8, OCI-Ly3, and OCI-Ly10 cells is 0.2, 0.5, 0.4, and 0.4 μM, respectively[1].

?MALT1 inhibitor MI-2 (62-1000 nM; 24 hours) causes a dose-dependent decrease in MALT1-mediated cleavage[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	HBL-1, TMD8, OCI-Ly3, OCI-Ly10 cells
Concentration:	1, 10, 100, 1000 nM
Incubation Time:	48 hours
Result:	The GI_{50} in HBL-1, TMD8, OCI-Ly3, and OCI-Ly10 cells was 0.2, 0.5, 0.4, and 0.4 μM, respectively.

Western Blot Analysis[1]

Cell Line:	HBL-1 cells
Concentration:	62, 125, 250, 500, 1000 nM
Incubation Time:	24 hours
Result:	Inhibits MALT1 cleavage of CYLD in HBL-1 cells.

In Vivo

MALT1 inhibitor MI-2 (25 mg/kg; i.p.; daily for 14 days) profoundly suppresses the growth of both the TMD8 and HBL-1 ABC-DLBCL xenografts[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Eight-week-old male SCID NOD (bearing HBL-1 and TMD8 cells)[1]
Dosage:	25 mg/kg
Administration:	Intraperitoneal injection; daily for 14 days
Result:	Profoundly suppressed the growth of both the TMD8 and HBL-1 ABC-DLBCL xenografts versus vehicle.

CUSTOMER VALIDATION

- J Virol. 2019 Nov 26;93(24):e01499-19.
- Front Microbiol. 2021 Feb 2;12:607451.
- Parasit Vectors. 2018 May 18;11(1):305.
- bioRxiv. 2023 Jul 11.

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REFERENCES

[1]. Fontan L, et al. MALT1 small molecule inhibitors specifically suppress ABC-DLBCL in vitro and in vivo. Cancer Cell. 2012 Dec 11;22(6):812-24.

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

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