Mepazine

Cat. No.: HY-121282

CAS No.: 60-89-9

Molecular Formula: $C_{19}H_{22}N_2S$

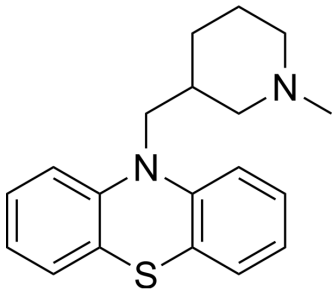
Molecular Weight: 310.46

Target: MALT1; Apoptosis

Pathway: Metabolic Enzyme/Protease; NF-κB; Apoptosis

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (322.10 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2210 mL	16.1051 mL	32.2103 mL
	5 mM	0.6442 mL	3.2210 mL	6.4421 mL
	10 mM	0.3221 mL	1.6105 mL	3.2210 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (16.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (16.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Mepazine (Pecazine) is a potent and selective MALT1 protease inhibitor with IC_{50}s of 0.83 and 0.42 μM for GSTMALT1 full length and GSTMALT1 325-760, respectively. Mepazine affects viability of ABC-DLBCL cells by enhancing apoptosis[1].

IC_{50} & Target

MALT1[1]

In Vitro

Mepazine (5-20 μM; 4 days) causes a decrease of cell viability in the activated B cell subtype of diffuse large B cell lymphoma (ABCDLBCL) cells, without significantly affecting GCB-DLBCL cells[1].

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

Cell Viability Assay[1]

Cell Line:	ABC-DLBCL cell lines (HBL1, OCI-Ly3, U2932, TMD8, OCI-Ly10) and GCB-DLBCL cell lines (BJAB, Su-DHL-6, Su-DHL-4)
Concentration:	5, 10, and 20 μM
Incubation Time:	4 days
Result:	Caused a decrease of cell viability in the ABC-DLBCL cells HBL1, OCI-Ly3, U2932, and TMD8, without significantly affecting GCB-DLBCL cells.

In Vivo

Mepazine (16 mg/kg; intraperitoneal administration) interferes with growth and induces apoptosis of ABC-DLBCL cell line OCI-Ly10 in NOD/scid IL-2Rg^{null} (NSG) mice with a murine DLBCL xenogeneic tumor model. Daily administration of Mepazine strongly impairs the expansion of the ABC-DLBCL cell line OCI-Ly10[1].

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

Animal Model:	6- to 8-week-old female NOD.Cg-Prkdc^{scid} Il2rg^{tm1Wjl}/SzJ (NSG) mice with a murine DLBCL xenogeneic tumor model[1]
Dosage:	400 μg per animal (25 g), corresponding to approximately 16 mg/kg.
Administration:	Intraperitoneal administration; started 1 or 12 days after transplantation and given continuously every 24 hr; daily application
Result:	Daily administration strongly impaired the expansion of the ABC-DLBCL cell line OCI-Ly10.

CUSTOMER VALIDATION

- Blood. 2022 Jul 27;blood.2022016424.
- Int J Mol Sci. 2023 Apr 17;24(8):7402.

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REFERENCES

[1]. Nagel D, et al. Pharmacologic inhibition of MALT1 protease by phenothiazines as a therapeutic approach for the treatment of aggressive ABC-DLBCL. Cancer Cell. 2012 Dec 11;22(6):825-37.

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