



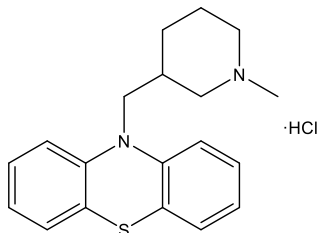
Catalog #10-4059

Mepazine HCl

CAS# 2975-36-2

10-[(1-Methylpiperidin-3-yl)methyl]phenothiazine hydrochloride; Pecazine hydrochloride

Lot # FBS5038



Mepazine was originally used clinically as a tranquilizer and antipsychotic medication. It has more recently been identified as a potent ($IC_{50} = 830$ nM) MALT1 protease inhibitor.¹ It inhibited anti-apoptotic NF- κ B signaling and decreased IL-2 production in diffuse large B cell lymphoma leading to apoptosis both *in vitro* and *in vivo*. Mepazine reduced proliferation and increased apoptosis in pancreatic ductal adenocarcinoma cells.² It was also able to reverse epithelial-to-mesenchymal transition in TNBC leading to reduced metastatic disease.³ Mepazine also prevented the development of DSS-induced experimental colitis via inhibition of NF- κ B and NLRP3 inflammasome activation.⁴ It also alleviated cytokine storm in a mouse model of acute T-cell activation.⁵

- 1) Nagel *et al.* (2012) *Pharmacological Inhibition of MALT1 Protease by Phenothiazines as a Therapeutic Approach for the Treatment of Aggressive ABC-DLBCL*; Cancer Cell **22** P825
- 2) Konczalla *et al.* (2020) *Biperiden and mepazine effectively inhibit MALT1 activity and tumor growth in pancreatic cancer*; Int. J. Cancer **146** 1618
- 3) Lee *et al.* (2022) *MALT1 is a Targetable Driver of Epithelial-to-Mesenchymal Transition in Claudin-Low, Triple-Negative Breast Cancer*; Mol. Cancer Res. **20** 373
- 4) Liu *et al.* (2016) *MALT1 inhibitors prevent the development of DSS-induced experimental colitis in mice via inhibiting NF- κ B and NLRP3 inflammasome activation*; Oncotarget **7** 30536
- 5) Dumont *et al.* (2020) *A MALT1 inhibitor suppresses human myeloid DC, effector T-cell and B-cell responses and retains Th1/regulatory T-cell homeostasis*; PLoS One **15** e0222548

PHYSICAL DATA

Molecular Weight:	346.92
Molecular Formula:	$C_{19}H_{22}N_2S \cdot HCl$
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (50 mg/ml); water (2 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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