

Product Name: Imipramine hydrochloride

Catalog No.: 7841

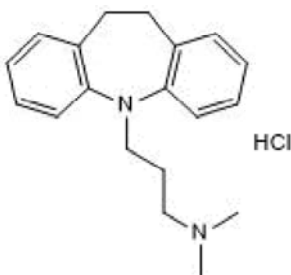
Batch No.: 2

CAS Number: 113-52-0

IUPAC Name: 5-(3-Dimethylaminopropyl)-10,11-dihydro-5H-dibenz[b,f]azepine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₂₄N₂.HCl
Batch Molecular Weight: 316.87
Physical Appearance: White solid
Solubility: DMSO to 50 mM
 water to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	72.02	7.95	8.84	11.19
Found	71.97	8.06	8.89	11.02

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Imipramine hydrochloride is a potent tricyclic antidepressant; inhibits 5-HT and noradrenalin transporters (K_i values = 1.3-20 nM and 20-142 nM respectively). Increases autophagy, both alone and in combination with VEGF inhibitors or Temozolomide (Cat. No. 2706), to reduce the progression of glioma and slow the proliferation of other tumors. Reprograms tumor-associated macrophages from immunosuppressive to immunostimulatory via histamine receptor inhibition.

Physical and Chemical Properties:

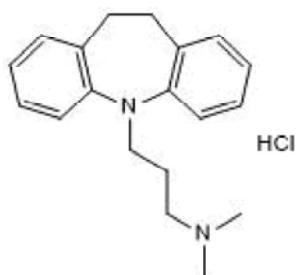
Batch Molecular Formula: $C_{19}H_{24}N_2.HCl$

Batch Molecular Weight: 316.87

Physical Appearance: White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

DMSO to 50 mM

water to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Chryplewicz et al (2022) Cancer cell autophagy, reprogrammed macrophages, and remodeled vasculature in glioblastoma triggers tumor immunity. *Cancer Cell* **40** 1111. PMID: 36113478.

Wang et al (2021) Imipramine impedes glioma progression by inhibiting YAP as a Hippo pathway independent manner and synergizes with temozolomide. *J.Cell.Mol.Med.* **25** 9350. PMID: 34469035.

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