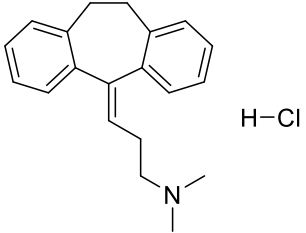


# Product data sheet



MedKoo Cat#: 317182 Name: Amitriptyline HCl CAS#: 549-18-8 (HCl) Chemical Formula: C <sub>20</sub> H <sub>24</sub> ClN Exact Mass: 277.18305 Molecular Weight: 313.869	 H-Cl
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

Amitriptyline, sold under the brand name Elavil among others, is a medication used to treat a number of mental illnesses. This including major depressive disorder and anxiety disorder, and less commonly attention deficit hyperactivity disorder and bipolar disorder. Other uses include prevention of migraines, treatment of neuropathic pain such as fibromyalgia and postherpetic neuralgia, and less commonly insomnia. It is taken by mouth. Common side effects include a dry mouth, trouble seeing, low blood pressure on standing, sleepiness, and constipation.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	54.85	174.75
DMF	25.0	79.65
Ethanol	44.0	140.19
PBS (pH 7.2)	0.5	1.59
Water	32.13	102.37

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.19 mL	15.93 mL	31.86 mL
5 mM	0.64 mL	3.19 mL	6.37 mL
10 mM	0.32 mL	1.59 mL	3.19 mL
50 mM	0.06 mL	0.32 mL	0.64 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

1. Jadrić R, Hasić S, Kiseljaković E, Radovanović J, Ićindić-Nakas E, Winterhalter-Jadrić M. Effects of amitriptyline administration on rat sera and brain beta-endorphins. *Bosn J Basic Med Sci.* 2006 Nov;6(4):64-6. doi: 10.17305/bjbm.2006.3124. PMID: 17177653; PMCID: PMC5807973.

## 7. Bioactivity

Biological target:

# Product data sheet



Amitriptyline hydrochloride is an inhibitor of serotonin reuptake transporter (SERT) and noradrenaline reuptake transporter (NET), with  $K_{is}$  of 3.45 nM and 13.3 nM for human SERT and NET, respectively.

## In vitro activity

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TBD

## In vivo activity

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After 1st day results show significant decrease of brain  $\beta$ -endorphin, which was present also in rat brains after 9th day of continuous Amitriptylin administration, compared to those of control group (Chart 2). We consider these changes as a consequence of continuous drug administration, despite constant variations in concentration, and rapid  $\beta$ -endorphin degradation. Results obtained by other authors, who were using different antidepressant drugs, speak in favour of  $\beta$ -endorphin value changes got in our investigation, previously showed in our study with Trazodon.

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*