

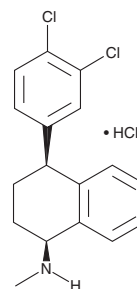
PRODUCT INFORMATION



Sertraline (hydrochloride)

Item No. 14839

CAS Registry No.: 79559-97-0
Formal Name: (1S,4S)-4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-N-methyl-1-naphthalenamine, monohydrochloride
Synonym: CP 51,974-1
MF: C₁₇H₁₇Cl₂N • HCl
FW: 342.7
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Sertraline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the sertraline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Sertraline (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of sertraline (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 16 mg/ml in DMSO and DMF.

Sertraline (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sertraline (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sertraline (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Sertraline is a selective serotonin reuptake inhibitor (SSRI).^{1,2} It inhibits monoamine uptake by the serotonin transporter (SERT) with an IC₅₀ value of 70 nM.¹ It is selective for SERT over the norepinephrine and dopamine transporters (IC₅₀s = 520 and 720 nM, respectively). Sertraline (3.2-56 mg/kg, s.c.) reduces immobility in the forced swim test in mice.² Sertraline (5 μM) prevents acid sphingomyelinase activation and subsequent ceramide release induced by infection with replication-deficient vesicular stomatitis virus pseudoviral particles (pp-VSV) presenting the severe acute respiratory coronavirus 2 (SARS-CoV-2) spike protein in Vero cells, an effect that can be overcome with exogenous application of C16 ceramide.³ Formulations containing sertraline have been used in the treatment of depression, obsessive-compulsive disorder (OCD), premenstrual dysphoric disorder (PMDD), and various anxiety disorders.

References

1. Welch, W.M., Kraska, A.R., Sarges, R., *et al.* Nontricyclic antidepressant agents derived from *cis*- and *trans*-1-amino-4-aryltetralins. *J. Med. Chem.* **27(11)**, 1508-1515 (1984).
2. Koe, B.K., Weissman, A., Welch, W.M., *et al.* Sertraline, 1S,4S-N-methyl-4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-1-naphthylamine, a new uptake inhibitor with selectivity for serotonin. *J. Pharmacol. Exp. Ther.* **226(3)**, 686-700 (1983).
3. Carpinteiro, A., Edwards, M.J., Hoffmann, M., *et al.* Pharmacological inhibition of acid sphingomyelinase prevents uptake of SARS-CoV-2 by epithelial cells. *Cell Rep. Med.* **1(8)**, 100142 (2020).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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