Product Datasheet

Sertraline hydrochloride

Catalog No. **BP-08726A** · CAS **79559-97-0** · Form **salt · hydrochloride** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-11-12**

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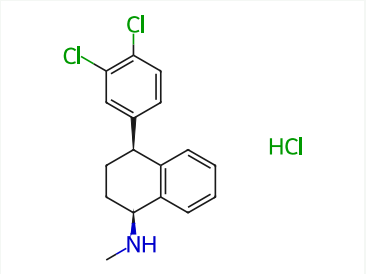
Target	Research area
Serotonin Transporter	**Neurological Disease; Cancer**

Molecular formula	—
Molecular weight	—

STRUCTURE



DESCRIPTION

Sertraline hydrochloride is an antidepressant of the selective serotonin reuptake inhibitor (SSRI) class. Sertraline hydrochloride is researched for a number of diseases, such as major depressive disorder and obsessive .

BIOLOGICAL ACTIVITY

In Vitro

Sertraline (1 μM, 12 hours) inhibits high mobility group box 1 (HMGB1)- or tumor necrosis factor-α (TNF-α)-induced microglial activation and inflammatory mediator production in microglia[3].

Sertraline (1 μM) inhibits the HMGB1/toll-like receptor 4 (TLR4)- and TNF-α/TNF receptor 1 (TNFR1)-mediated nuclear factor-kappa B (NF-κB) activation in HMGB1- or TNF-α-stimulated microglia[3].

In Vivo

Sertraline (10 mg/kg) is shown to produce the optimal anti-depression effectsin chronic unpredictable mild stress (CUMS)-exposed mice[3].

Sertraline (10 mg/kg; a single i.p.) significantly reduces the immobility time during forced swim test (FST) in all female animals[4].

Sertraline (10 mg/kg; a single i.p.) does not alter spontaneous locomotor activity in all three genotypes regardless of sex difference[4].

SOLUBILITY

Soluble in DMSO : 50 mg/mL

REFERENCES

References

[1]. Murdoch D, et al. Sertraline. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in depression and obsessive-compulsive disorder. Drugs. 1992 Oct;44(4):604-24.

[2]. Koe BK. Preclinical pharmacology of sertraline: a potent and specific inhibitor of serotonin reuptake. J Clin Psychiatry. 1990 Dec;51 Suppl B:13-7.

[3]. Xiang X, et, al. Anti-depressive Effect of Arctiin by Attenuating Neuroinflammation via HMGB1/TLR4- And TNF-α/TNFR1-mediated NF-κB Activation. ACS Chem Neurosci. 2020 Jul 1.

[4]. Lei M, et, al. Sex Differences in Antidepressant Effect of Sertraline in Transgenic Mouse Models. Front Cell Neurosci. 2019 Feb 1; 13:24.

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