

Product data sheet



MedKoo Cat#: 318691 Name: Sertindole CAS#: 106516-24-9 Chemical Formula: C ₂₄ H ₂₆ ClFN ₄ O Exact Mass: 440.1779 Molecular Weight: 440.94	
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:

Sertindole is one of the newer antipsychotic medications and a neuroleptic. Like the other atypical antipsychotics, it has activity at dopamine and serotonin receptors in the brain. It is used in the treatment of schizophrenia.

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
DMF	15	34.02
DMSO	5	11.34

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.27 mL	11.34 mL	22.68 mL
5 mM	0.45 mL	2.27 mL	4.54 mL
10 mM	0.23 mL	1.13 mL	2.27 mL
50 mM	0.05 mL	0.23 mL	0.45 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

- Zhuang W, Mun SY, Park M, Jeong J, Kim HR, Na S, Lee SJ, Park H, Park WS. Inhibition of voltage-dependent K⁺ channels in rabbit coronary arterial smooth muscle cells by the atypical antipsychotic agent sertindole. *J Appl Toxicol.* 2023 Oct 3. doi: 10.1002/jat.4549. Epub ahead of print. PMID: 37786982.
- Hsu CY, Yang WT, Lin JH, Lu CH, Hu KC, Lan TH, Chang CC. Sertindole, an Antipsychotic Drug, Curbs the STAT3/BCL-xL Axis to Elicit Human Bladder Cancer Cell Apoptosis In Vitro. *Int J Mol Sci.* 2023 Jul 24;24(14):11852. doi: 10.3390/ijms241411852. PMID: 37511611; PMCID: PMC10380261.

In vivo study

- Zhang W, Zhang C, Liu F, Mao Y, Xu W, Fan T, Sun Q, He S, Chen Y, Guo W, Tan Y, Jiang Y. Antiproliferative activities of the second-generation antipsychotic drug sertindole against breast cancers with a potential application for treatment of breast-to-brain metastases. *Sci Rep.* 2018 Oct 25;8(1):15753. doi: 10.1038/s41598-018-33740-0. PMID: 30361678; PMCID: PMC6202417.
- Mutlu O, Ulak G, Celikyurt IK, Akar FY, Erden F, Tanyeri P. Effects of olanzapine, sertindole and clozapine on MK-801 induced visual memory deficits in mice. *Pharmacol Biochem Behav.* 2011 Oct;99(4):557-65. doi: 10.1016/j.pbb.2011.06.011. Epub 2011 Jun 15. PMID: 21693127.

Product data sheet



7. Bioactivity

Biological target:

Sertindole binds to dopamine D2 receptors and the serotonin (5-HT) receptor subtypes 5-HT1D, 5-HT2A, and 5-HT2C (Kds = 2.7, 20, 0.14, and 6 nM, respectively). It also binds to histamine H1 and α 1- and α 2-adrenergic receptors. It also binds to histamine H1 and α 1- and α 2-adrenergic receptors (Kds = 320, 3.9, and 190 nM, respectively).

In vitro activity

The use of sertindole as an antipsychotic drug may have adverse effects on the cardiovascular system. In native VSMCs from rabbit coronary arteries, sertindole induced dose-dependent inhibition of Kv channels, with an IC50 of $3.13 \pm 0.72 \mu\text{M}$. Sertindole did not cause a change in the steady-state activation curve, but it did lead to a negative shift in the steady-state inactivation curve. The inhibitory response to sertindole was significantly diminished by pretreatment with a Kv1.5 inhibitor but not by Kv2.1 and Kv7 subtype inhibitors.

Reference: J Appl Toxicol. 2023 Oct 3. <https://pubmed.ncbi.nlm.nih.gov/37786982/>

In vivo activity

Sertindole has the potential to improve cognition in the context of schizophrenia. This study investigated the impact of second-generation antipsychotics, one being sertindole, on visual recognition memory in both naive and MK-801-treated mice. Sertindole did not have effect on locomotion in naive mice. However, it did reverse MK-801-induced cognitive impairment. Sertindole had no effect on anxiety in naive mice, but reversed the MK-801-induced effects on locomotion and anxiety.

Reference: Pharmacol Biochem Behav. 2011 Oct;99(4):557-65. <https://pubmed.ncbi.nlm.nih.gov/21693127/>

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.