

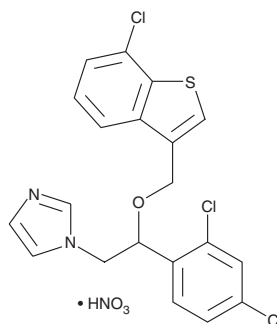
PRODUCT INFORMATION



Sertaconazole (nitrate)

Item No. 22232

CAS Registry No.: 99592-39-9
Formal Name: 1-[2-[(7-chlorobenzo[b]thien-3-yl)methoxy]-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole, mononitrate
Synonym: FI-7045
MF: C₂₀H₁₅Cl₃N₂OS • HNO₃
FW: 500.8
Purity: ≥98%
UV/Vis.: λ_{max}: 225 nm
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

Sertaconazole (nitrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the sertoconazole (nitrate) in the solvent of choice. Sertaconazole (nitrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of sertoconazole (nitrate) in ethanol is approximately 0.1 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Sertaconazole (nitrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sertoconazole (nitrate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sertaconazole (nitrate) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Sertaconazole is an imidazole antifungal agent.¹ It is active against various yeasts, including *C. albicans* and *C. tropicalis*, and dermatophytes, including *Microsporum*, *Trichophyton*, and *Epidermophyton* (MICs = 0.35-5.04 and 0.24-2 µg/ml, respectively). Sertaconazole inhibits ergosterol (Item No. 19850) biosynthesis (IC₅₀ = 115 nM) and decreases intracellular ATP levels in a concentration-dependent manner in *C. albicans*.^{2,3} Topical application of sertoconazole (1%) reduces ear edema induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014), resiniferatoxin, or oxazolone in mouse models of irritant dermatitis, neurogenic dermatitis, and allergic contact hypersensitivity, respectively.⁴ Sertaconazole also selectively inhibits long-chain acyl-CoA synthetase 4 (ACSL4; IC₅₀ = 0.28 µM) over ACSL3 at 50 µM.⁵ It inhibits lipid peroxidation and ferroptosis induced by (1S,3R)-RSL3 (Item No. 19288) in LUHMES cells when used at a concentration of 5 µM. Formulations containing sertoconazole have been used in the treatment of interdigital tinea pedis.

References

1. Palacin, C., Sacristán, A., and Ortiz, J.A. *Arzneimittelforschung* **42(5A)**, 699-705 (1992).
2. Agut, J., Palacin, C., Salgado, J., et al. *Arzneimittelforschung* **42(5A)**, 721-724 (1992).
3. Agut, J., Palacin, C., Sacristán, A., et al. *Arzneimittelforschung* **42(5A)**, 718-720 (1992).
4. Liebel, F., Lyte, P., Garay, M., et al. *Arch. Dermatol. Res.* **298(4)**, 191-199 (2006).
5. Marteau, R., Ravez, S., Mazhari Dorooee, D., et al. *Biochem. Pharmacol.* **204**, 115239 (2022).

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.

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