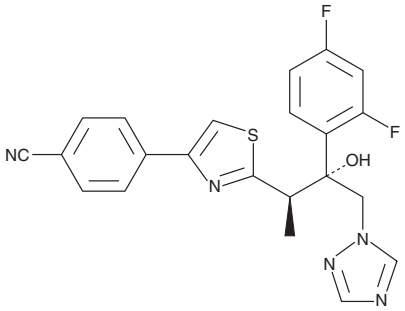
PRODUCT INFORMATION

Ravuconazole

Item No. 18750

CAS Registry No.:	182760-06-1
Formal Name:	4-[2-[(1R,2R)-2-(2,4-difluorophenyl)-2-hydroxy-1-methyl-3-(1H-1,2,4-triazol-1-yl)propyl]-4-thiazolyl]-benzonitrile
Synonyms:	BMS 207147, ER-30346
MF:	$C_{22}H_{17}F_2N_5OS$
FW:	437.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 285 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

Ravuconazole is supplied as a crystalline solid. A stock solution may be made by dissolving the ravuconazole in the solvent of choice, which should be purged with an inert gas. Ravuconazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ravuconazole in these solvents is approximately 5, 20, and 25 mg/ml, respectively.

Ravuconazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ravuconazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ravuconazole has a solubility of approximately 0.25 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ravuconazole is an orally available triazole fungicide that potently inhibits the growth of a wide range of fungi (MICs range from 25 to 780 ng/ml).[1,2] Like other azoles, ravuconazole inhibits cytochrome P450 (CYP) isoforms that are involved in ergosterol biosynthesis, interfering with the generation of the fungal and protozoan cell membranes.[3] Ravuconazole specifically inhibits sterol 14α-demethylase (CYP51).[4,5] As this enzyme is also important in the development of trypanosomes, ravuconazole is effective against *T. cruzi* infections in animal models of Chagas disease.[4,5]

References

1. Hata, K., Kimura, J., Miki, H., *et al.* *In vitro* and *in vivo* antifungal activities of ER-30346, a novel oral triazole with a broad antifungal spectrum. *Antimicrob. Agents Chemother.* **40(10)**, 2237-2242 (1996).
2. Hata, K., Kimura, J., Miki, H., *et al.* Efficacy of ER-30346, a novel oral triazole antifungal agent, in experimental models of aspergillosis, candidiasis, and cryptococcosis. *Antimicrob. Agents Chemother.* **40(10)**, 2243-2247 (1996).
3. Carillo-Muńoz, A.J., Giusiano, G., Ezkurra, P.A., *et al.* Antifungal agents: Mode of action in yeast cells. *Rev. Esp. Quimioter.* **19(2)**, 130-139 (2006).
4. Urbina, J.A., Payares, G., Sanoja, C., *et al.* *In vitro* and *in vivo* activities of ravuconazole on *Trypanosoma cruzi*, the causative agent of Chagas disease. *Int. J. Antimicrob. Agents* **21(1)**, 27-38 (2003).
5. Lepsheva, G.I. Design or screening of drugs for the treatment of Chagas disease: What shows the most promise? *Expert Opin. Drug Discov.* **8(12)**, 1479-1489 (2013).

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