

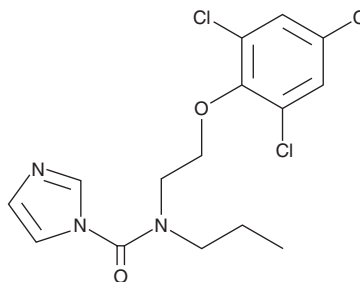
PRODUCT INFORMATION



Prochloraz

Item No. 24051

CAS Registry No.: 67747-09-5
Formal Name: N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-1H-imidazole-1-carboxamide
Synonym: BTS-40542
MF: C₁₅H₁₆Cl₃N₃O₂
FW: 376.7
Purity: ≥98%
Supplied as: A 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

Prochloraz is supplied as a solid. A stock solution may be made by dissolving the prochloraz in the solvent of choice, which should be purged with an inert gas. Prochloraz is slightly soluble in chloroform and methanol.

Description

Prochloraz is an imidazole antifungal that inhibits ergosterol biosynthesis *via* inhibition of the cytochrome P450-dependent 14 α -demethylation of lanosterol, which results in disruption of the fungal cell membrane and cell death.¹ It inhibits human placenta microsomal aromatase *in vitro* (IC₅₀ = 40 nM).² Prochloraz also acts as an antagonist of the estrogen receptor (ER) and androgen receptor (AR) (IC₅₀s = 25 and 4 μ M, respectively) as well as activates the aryl hydrocarbon receptor (AhR; EC₅₀ = 1 μ M).³ *In vivo*, prochloraz (250 mg/kg) reduces the weight of seminal vesicles in intact male rats and of seminal vesicles, ventral prostate, and bulbourethral glands in castrated testosterone-treated male rats.⁴ It also reduces testosterone levels and increases progesterone levels in male rat pups following administration of a 30 mg/kg per day dose to pregnant females during gestation.

References

1. Antignac, E., Koch, B., Grolier, P., *et al.* Prochloraz as potent inhibitor of benzo[a]pyrene metabolism and mutagenic activity in rat liver fractions. *Toxicol. Lett.* **54(2-3)**, 309-315 (1990).
2. Zarn, J.A., Brüsweiler, B.J., and Schlatter, J.R. Azole fungicides affect mammalian steroidogenesis by inhibiting sterol 14 α -demethylase and aromatase. *Environ. Health Perspect.* **111(3)**, 255-261 (2003).
3. Andersen, H.R., Vinggaard, A.M., Rasmussen, T.H., *et al.* Effects of currently used pesticides in assays for estrogenicity, androgenicity, and aromatase activity *in vitro*. *Toxicol. Appl. Pharmacol.* **179(1)**, 1-12 (2002).
4. Vinggaard, A.M., Hass, U., Dalgaard, M., *et al.* Prochloraz: An imidazole fungicide with multiple mechanisms of action. *Int. J. Androl.* **29(1)**, 186-192 (2006).

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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