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# Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

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## Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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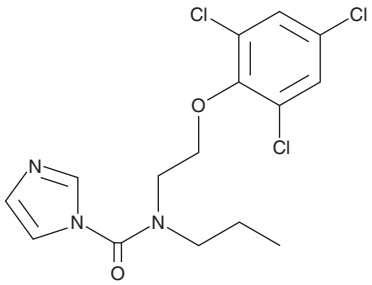
# PRODUCT INFORMATION

## 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:** | $C_{15}H_{16}Cl_3N_3O_2$ |
| **FW:** | 376.7 |
| **Purity:** | ≥98% |
| **Supplied as:** | A solid |
| **Storage:** | -20°C |
| **Stability:** | ≥2 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 14α-demethylation of lanosterol, which results in disruption of the fungal cell membrane and cell death.[1] It inhibits human placenta microsomal aromatase *in vitro* ($IC_{50}$ = 40 nM).[2] Prochloraz also acts as an antagonist of the estrogen receptor (ER) and androgen receptor (AR) ($IC_{50}$s = 25 and 4 µM, respectively) as well as activates the aryl hydrocarbon receptor (AhR; $EC_{50}$ = 1 µM).[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. Formulations containing prochloraz have been used to control fungal growth in mushroom cultivation.

### References


1. Antignac, E., Koch, B., Grolier, P., *et al.* Prochloraz as potent inhibitor of benzo[α]pyrene metabolism and mutagenic activity in rat liver fractions. *Toxicol. Lett.* **54(2-3)**, 309-315 (1990).
2. Zarn, J.A., Brüschweiler, 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).





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