

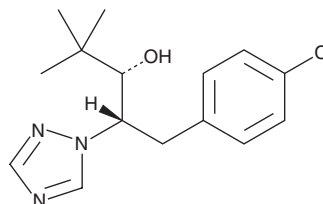
PRODUCT INFORMATION



Paclobutrazol

Item No. 18864

CAS Registry No.: 76738-62-0
Formal Name: (αR,βR)-rel-β-[(4-chlorophenyl)methyl]-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol
Synonym: PBZ
MF: C₁₅H₂₀ClN₃O
FW: 293.8
Purity: ≥95%
UV/Vis.: λ_{max}: 221 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

PBZ is supplied as a crystalline solid. A stock solution may be made by dissolving the PBZ in the solvent of choice, which should be purged with an inert gas. PBZ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PBZ in these solvents is approximately 10 mg/ml.

PBZ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PBZ should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. PBZ has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PBZ is a triazole-containing plant growth retardant that is known to inhibit the biosynthesis of gibberellins.^{1,2} It also has antifungal activities.³ PBZ, which is transported acropetally in plants, can also suppress the synthesis of abscisic acid and induce chilling tolerance in plants.^{1,4,5} PBZ is typically used to support research on the role of gibberellins in plant biology.^{6,7} Formulations containing paclobutrazol have been used in the control of fungi and the regulation of plant growth in agriculture.

References

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5. Pinhero, R.G., Rao, M.V., Paliyath, G., et al. Changes in activities of antioxidant enzymes and their relationship to genetic and paclobutrazol-induced chilling tolerance of maize seedlings. *Plant Physiol.* **114**(2), 695-704 (2016).
6. Wang, G.L., Que, F., Xu, Z.-S., et al. Exogenous gibberellin altered morphology, anatomic and transcriptional regulatory networks of hormones in carrot root and shoot. *BMC Plant Biol.* **15**(1), (2015).
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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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