

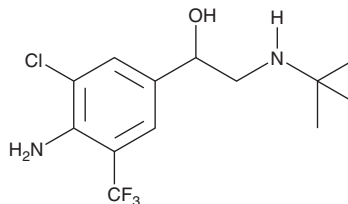
PRODUCT INFORMATION



Mabuterol

Item No. 23246

CAS Registry No.: 56341-08-3
Formal Name: 4-amino-3-chloro- α -[[[(1,1-dimethylethyl)amino]methyl]-5-(trifluoromethyl)-benzenemethanol
MF: C₁₃H₁₈ClF₃N₂O
FW: 310.7
Purity: \geq 98%
UV/Vis.: λ_{max} : 245, 311 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Mabuterol is supplied as a crystalline solid. A stock solution may be made by dissolving the mabuterol in the solvent of choice, which should be purged with an inert gas. Mabuterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of mabuterol in these solvents is approximately 30 mg/ml.

Description

Mabuterol is an agonist of the β_2 -adrenergic receptor (β_2 -AR).¹⁻³ It induces relaxation of isolated tracheal muscle in guinea pigs and inhibits bronchoconstriction in a guinea pig model of experimental asthma.² Administration of mabuterol decreases blood pressure and increases heart rate in a dose-dependent manner in rats, cats, and dogs.³ These effects are reversed by the selective β_2 -AR antagonist ICI 118551 (Item No. 15591), indicating mabuterol is acting at β_2 -ARs.¹ At concentrations \geq 1 μ M, mabuterol acts as a β_1 -AR antagonist in isolated dog right atria.

References

1. Akahane, K., Furukawa, Y., Ogiwara, Y., *et al.* β -adrenoceptor blocking effects of a selective β_2 -agonist, mabuterol, on the isolated, blood-perfused right atrium of the dog. *Br. J. Pharmacol.* **97(3)**, 709-716 (1989).
2. Murai, T., Maejima, T., and Osada, E. Pharmacological studies of mabuterol, a new selective beta 2-stimulant. I: Bronchodilating effect. *Arzneimittelforschung* **34(11A)**, 1633-1640 (1984).
3. Osada, E., Murai, T., Ishizaka, Y., *et al.* Pharmacological studies of mabuterol, a new selective beta 2-stimulant. II: Effects on the cardiovascular system and smooth muscle organs. *Arzneimittelforschung* **34(11A)**, 1641-1651 (1984).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM