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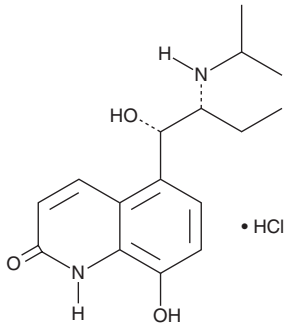
PRODUCT INFORMATION

Procaterol (hydrochloride)

Item No. 28479

CAS Registry No.: 62929-91-3
Formal Name: *rel*-8-hydroxy-5-[(1R,2S)-1-hydroxy-2-[(1-methylethyl) amino]butyl]-2(1H)-quinolinone, monohydrochloride
MF: $C_{16}H_{22}N_2O_3 \bullet HCl$
FW: 326.8
Purity: ≥98%
UV/Vis.: λ_{max}: 237, 262, 297 nm
Supplied as: A crystalline 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

Procaterol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the procaterol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Procaterol (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 30 mg/ml.

Procaterol (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, procaterol (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Procaterol (hydrochloride) has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Procaterol is an agonist of β_2-adrenergic receptors (β_2-ARs).[1] It binds to (K_d = 46 pM), and is selective for, β_2-ARs over β_1-ARs (K_d = 4,000 pM). Procaterol binds more potently to β_2-ARs in isolated guinea pig lung than to β_1-ARs in isolated guinea pig cardiac ventricle in the presence (IC_{50}s = 175 and 1,660 nM, respectively) and absence of GTP (Item No. 16060; IC_{50}s = 55.1 and 1,660 nM, respectively).[2] It inhibits contractions induced by acetylcholine (Item No. 23829) in isolated guinea pig trachea (EC_{50} = 10.5 nM).[3] *In vivo*, procaterol inhibits histamine-induced airflow obstruction in a guinea pig model of ovalbumin-sensitized asthma when administered *via* inhalation at a dose of 10 µg/ml.[4]

References

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2. Kikkawa, H., Naito, K., and Ikezawa, K. Tracheal relaxing effects and β_2-selectivity of TA-2005, a newly developed bronchodilating agent, in isolated guinea pig tissues. *Jpn. J. Pharmacol.* **57(2)**, 175-185 (1991).
3. Yoshizaki, S., Tanimura, K., Tamada, S., *et al.* Sympathomimetic amines having a carbostyril nucleus. *J. Med. Chem.* **19(9)**, 1138-1142 (1976).
4. Mirza, Z.N., Tokuyama, K., Arakawa, H., *et al.* Inhaled procaterol inhibits histamine-induced airflow obstruction and microvascular leakage in guinea-pig airways with allergic inflammation. *Clin. Exp. Allergy* **28(5)**, 644-652 (1998).

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