

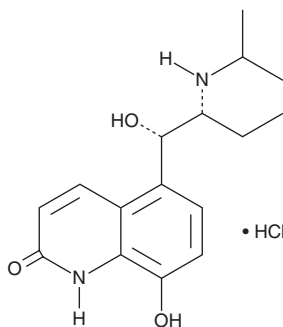
# PRODUCT INFORMATION



## Procatерol (hydrochloride)

Item No. 28479

**CAS Registry No.:** 62929-91-3  
**Formal Name:** *rel*-8-hydroxy-5-[(1*R*,2*S*)-1-hydroxy-2-[(1-methylethyl)amino]butyl]-2(1*H*)-quinolinone, monohydrochloride  
**MF:** C<sub>16</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub> • HCl  
**FW:** 326.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 237, 262, 297 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

Procatерol (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.

Procatерol (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

Procatерol is an agonist of  $\beta_2$ -adrenergic receptors ( $\beta_2$ -ARs).<sup>1</sup> It binds to ( $K_d = 46$  pM), and is selective for,  $\beta_2$ -ARs over  $\beta_1$ -ARs ( $K_d = 4,000$  pM). Procaterol binds more potently to  $\beta_2$ -ARs in isolated guinea pig lung than to  $\beta_1$ -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).<sup>2</sup> It inhibits contractions induced by acetylcholine (Item No. 23829) in isolated guinea pig trachea ( $EC_{50} = 10.5$  nM).<sup>3</sup> *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  $\mu$ g/ml.<sup>4</sup>

### References

1. Marullo, S., Emorine, L.J., Strosberg, A.D., *et al.* Selective binding of ligands to  $\beta_1$ ,  $\beta_2$  or chimeric  $\beta_1/\beta_2$ -adrenergic receptors involves multiple subsites. *EMBO J.* **9**(5), 1471-1476 (1990).
2. Kikkawa, H., Naito, K., and Ikezawa, K. Tracheal relaxing effects and  $\beta_2$ -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 carbostyryl 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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