

PRODUCT INFORMATION

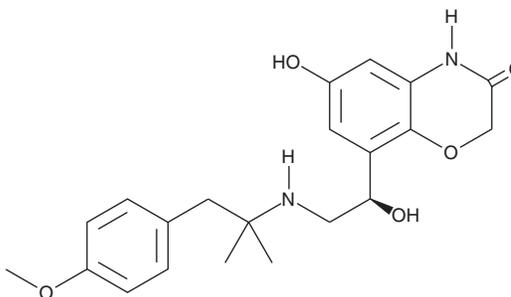


Olodaterol

Item No. 21794

CAS Registry No.: 868049-49-4
Formal Name: 6-hydroxy-8-[[1R]-1-hydroxy-2-[[2-(4-methoxyphenyl)-1,1-dimethylethyl]amino]ethyl]-2H-1,4-benzoxazin-3(4H)-one

Synonym: BI-1744
MF: C₂₁H₂₆N₂O₅
FW: 386.4
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 303 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

Olodaterol is supplied as a crystalline solid. A stock solution may be made by dissolving the olodaterol in the solvent of choice, which should be purged with an inert gas. Olodaterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of olodaterol in these solvents is approximately 1, 15, and 20 mg/ml, respectively.

Olodaterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, olodaterol should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Olodaterol has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Olodaterol is a selective agonist of β_2 -adrenergic receptors (β_2 -ARs; EC₅₀s = 97.7 and 2,725 nM for human β_2 - and β_1 -ARs, respectively).¹ *In vivo*, olodaterol completely reverses acetylcholine-induced bronchoconstriction without cardiovascular side effects in guinea pigs. It also exhibits dose-dependent bronchoprotection in a beagle model of acetylcholine-induced bronchoconstriction for a period of 24 hours, indicating potential for once-daily dosing.² Formulations containing olodaterol have been used to treat bronchoconstriction associated with chronic obstructive pulmonary disease.³

References

1. Boujysou, T., Hoenke, C., Rudolf, K., *et al.* Discovery of olodaterol, a novel inhaled β_2 -adrenoceptor agonist with a 24 h bronchodilatory efficacy. *Bioorg. Med. Chem. Lett.* **20(4)**, 1410-1414 (2010).
2. Boyssou, T., Casarosa, P., Naline, E., *et al.* Pharmacological characterization of olodaterol, a novel inhaled β_2 -adrenoceptor agonist exerting a 24-hour-long duration of action in preclinical models. *J. Pharmacol. Exp. Ther.* **334(1)**, 53-62 (2010).
3. Donohue, J. F. Systematic review comparing LABA, olodaterol, and indacaterol: Limitations. *Int. J. Chron. Obstruct. Pulmon. Dis.* **9**, 1331-1333 (2014).

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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