

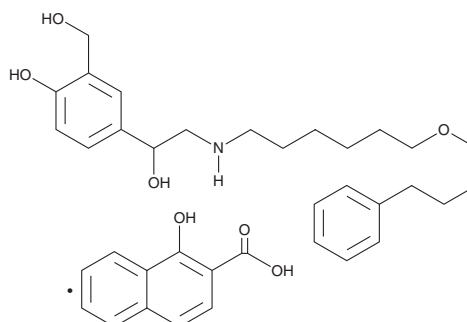
PRODUCT INFORMATION



Salmeterol (xinafoate)

Item No. 16009

CAS Registry No.: 94749-08-3
Formal Name: 4-hydroxy- α -1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-1,3-benzenedimethanol, 1-hydroxy-2-naphthalenecarboxylic acid
Synonym: GR-33343G
MF: C₂₅H₃₇NO₄ • C₁₁H₈O₃
FW: 603.8
Purity: ≥98%
UV/Vis.: λ_{max} : 215, 253, 283, 340 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

Salmeterol (xinafoate) is supplied as a crystalline solid. A stock solution may be made by dissolving the salmeterol xinafoate in the solvent of choice. Salmeterol (xinafoate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of salmeterol (xinafoate) in these solvents is approximately 2, 25, and 30 mg/ml, respectively.

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

Description

Salmeterol is a long-acting β_2 -adrenergic receptor agonist (β_2 -AR; EC₅₀s = 0.79, 63.1, and 9.4 nM for β_2 -, β_1 -, and β_3 -ARs, respectively).¹ It inhibits electrically-stimulated contraction of isolated guinea pig trachea strips (EC₅₀ = 2.51 nM) and histamine-induced bronchoconstriction in guinea pigs via aerosol administration of doses ranging from 0.12 to 12 mM.^{1,2} Salmeterol binds to an exosite domain of β_2 -adrenergic receptors, producing a slow onset of action and prolonged activation.³ Formulations containing salmeterol have been used in the treatment of asthma, including exercise-induced asthma, and chronic obstructive pulmonary disease.

References

1. Procopiou, P.A., Barrett, V.J., Ford, A.J., *et al.* The discovery of long-acting saligenin β_2 adrenergic receptor agonists incorporating a urea group. *Bioorg. Med. Chem.* **19(20)**, 6026-6032 (2011).
2. Ball, D.I., Brittain, R.T., Coleman, R.A., *et al.* Salmeterol, a novel, long-acting β_2 -adrenoceptor agonist: Characterization of pharmacological activity *in vitro* and *in vivo*. *Br. J. Pharmacol.* **104(3)**, 665-671 (1991).
3. Isin, B., Estiu, G., Wiest, O., *et al.* Identifying ligand binding conformations of the β_2 -adrenergic receptor by using its agonists as computational probes. *PLoS One* **7(12)**, (2012).

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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