

Product Name: Salmeterol

Catalog No.: 1660

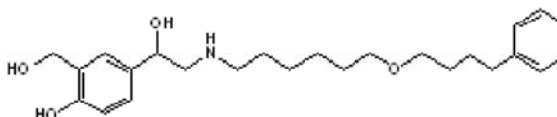
Batch No.: 2

CAS Number: 89365-50-4

IUPAC Name: 4-Hydroxy- α 1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-1,3-benzenedimethanol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅H₃₇NO₄
Batch Molecular Weight: 415.57
Physical Appearance: White solid
Solubility: ethanol to 50 mM
 DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.75 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Melting Point: Between 84 - 85°C
HPLC: Shows >99.5% purity
¹H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	72.26	8.97	3.37
Found	72.34	9.23	3.42

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and selective β_2 -adrenoceptor agonist (EC_{50} = 5.3 nM); bronchodilator. Unlike other β_2 agonists, binds to exo-site domain of β_2 receptors, producing a slow onset of action and prolonged activation.

Physical and Chemical Properties:

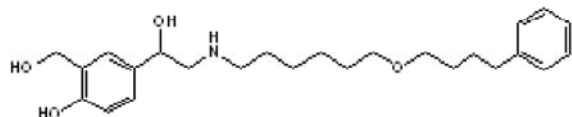
Batch Molecular Formula: C₂₅H₃₇NO₄

Batch Molecular Weight: 415.57

Physical Appearance: White solid

Minimum Purity: $\geq 99\%$

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 50 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold for research purposes under agreement from GlaxoSmithKline

References:

Clark et al (1996) Stable activation and desensitization of β_2 -adrenergic receptor stimulation of adenylyl cyclase by salmeterol: evidence for quasi-irreversible binding to an exosite. *Mol.Pharmacol.* **49** 182. PMID: 8569705.

Ellis et al (1995) Correlation of cyclic AMP accumulation and relaxant actions of salme. and salbutamol in bovine tracheal smooth muscle. *Br.J.Pharmacol.* **116** 2510. PMID: 8581292.

Johnson et al (1993) The pharmacology of salme. *Life Sci.* **52** 2131. PMID: 8099695.

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