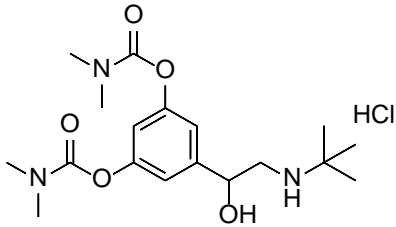


# Product data sheet



MedKoo Cat#: 317309 Name: Bambuterol Hydrochloride CAS#: 81732-46-9 Chemical Formula: C <sub>18</sub> H <sub>30</sub> ClN <sub>3</sub> O <sub>5</sub> Molecular Weight: 403.90		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

## 1. Product description:

Bambuterol Hydrochloride is a long acting beta-adrenoceptor agonist used in the treatment of asthma. Bambuterol Hydrochloride acts as a bronchodilator. It inhibits plasma BChE (cholinesterase) during metabolism prolongs suxamethonium-induced neuromuscular blockade.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	100.0	247.59
Water	41.20	102.01
Ethanol	8.0	19.81
PBS (pH 7.2)	10.0	24.76

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.48 mL	12.38 mL	24.76 mL
5 mM	0.50 mL	2.48 mL	4.95 mL
10 mM	0.25 mL	1.24 mL	2.48 mL
50 mM	0.05 mL	0.25 mL	0.50 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

1. Chatonnet F, Boudinot E, Chatonnet A, Taysse L, Daulon S, Champagnat J, Foutz AS. Respiratory survival mechanisms in acetylcholinesterase knockout mouse. Eur J Neurosci. 2003 Sep;18(6):1419-27. doi: 10.1046/j.1460-9568.2003.02867.x. PMID: 14511322.

### In vivo study

1. Chatonnet F, Boudinot E, Chatonnet A, Taysse L, Daulon S, Champagnat J, Foutz AS. Respiratory survival mechanisms in acetylcholinesterase knockout mouse. Eur J Neurosci. 2003 Sep;18(6):1419-27. doi: 10.1046/j.1460-9568.2003.02867.x. PMID: 14511322.  
2. Xie QM, Zeng LH, Zheng YX, Lu YB, Yang QH. Bronchodilating effects of bambuterol on bronchoconstriction in guinea pigs. Zhongguo Yao Li Xue Bao. 1999 Jul;20(7):651-4. PMID: 10678133.

## 7. Bioactivity

Biological target: Bambuterol hydrochloride is a long acting beta-adrenoceptor agonist (LABA) used in the treatment of asthma.

# Product data sheet



## In vitro activity

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In vitro, bath-applied bambuterol (1-100 microm) and tetraisopropylpyrophosphoramidate (10-100 microm) decreased BChE activity in the brainstem but did not perturb central respiratory activity recorded from spinal nerve rootlets.

Reference: Eur J Neurosci. 2003 Sep;18(6):1419-27. <https://onlinelibrary.wiley.com/doi/abs/10.1046/j.1460-9568.2003.02867.x?sid=nlm%3Apubmed>

## In vivo activity

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The effects of bambuterol (Bam) on bronchoconstriction in guinea pigs were studied. Bam dose-dependently prolonged the time to histamine-induced collapse. Bam 2 or 10 mg.kg-1 i.g. 2 h before ovalbumin aerosol partly or almost completely inhibited bronchial challenge of ovalbumin-induced change of RL and Cdyn. Bam 0.1-1.0 mumol.L-1 gave a weak relaxation on isolated tracheal strips induced by carbamylcholine and failed to relax the isolated resting lung parenchyma strips in guinea pig. Overall, Bam showed a long-acting bronchodilation by its slow metabolism in vivo.

Reference: Zhongguo Yao Li Xue Bao. 1999 Jul;20(7):651-4. <https://onlinelibrary.wiley.com/doi/abs/10.1046/j.1460-9568.2003.02867.x?sid=nlm%3Apubmed>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*