



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION

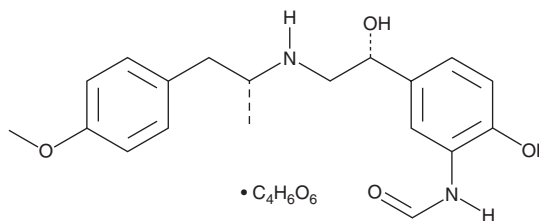


## Arformoterol (tartrate)

Item No. 23935

**CAS Registry No.:** 200815-49-2  
**Formal Name:** N-[2-hydroxy-5-[(1R)-1-hydroxy-2-[[[(1R)-2-(4-methoxyphenyl)-1-methylethyl]amino]ethyl]phenyl]-formamide, (2R,3R)-2,3-dihydroxybutanedioate

**Synonym:** (R,R)-Formoterol  
**MF:** C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> • C<sub>4</sub>H<sub>6</sub>O<sub>6</sub>  
**FW:** 494.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 216, 247, 284 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Arformoterol (tartrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the arformoterol (tartrate) in the solvent of choice. Arformoterol (tartrate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of arformoterol (tartrate) in these solvents is approximately 25 and 12.5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of arformoterol (tartrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of arformoterol (tartrate) in PBS, pH 7.2, is approximately 2.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Aformoterol is the (R,R)-enantiomer of the β<sub>2</sub>-adrenergic receptor (β<sub>2</sub>-AR) agonist formoterol (Item No. 15584).<sup>1</sup> It selectively binds to β<sub>1</sub>- over β<sub>2</sub>-ARs (K<sub>d</sub>s = 2.9 and 113 nM, respectively) as well as β<sub>3</sub>-adrenergic, B<sub>2</sub> bradykinin, neurokinin 1 (NK<sub>1</sub>) and NK<sub>2</sub> receptors when used at concentrations up to 3 μM. Aformoterol induces cAMP accumulation in cultured human bronchial epithelial cells. *Ex vivo*, aformoterol (0.01-1,000 nM) induces dose-dependent relaxation of guinea pig tracheal strips precontracted with carbamoylcholine (Item No. 14486), ovalbumin, or histamine (pD<sub>2</sub>s = 8.4, 9.5, and 9.5, respectively). *In vivo*, aformoterol reverses histamine- and ovalbumin-induced bronchoconstriction in guinea pigs (ED<sub>50</sub>s = 1 and 40 nmol/kg, respectively). Formulations containing aformoterol have been used in the treatment of chronic obstructive pulmonary disease (COPD).

### Reference

1. Handley, D.A., Senanayake, C.H., Dutczak, W., *et al.* Biological actions of formoterol isomers. *Pulm. Pharmacol. Ther.* **15**(2), 135-145 (2002).

#### 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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