

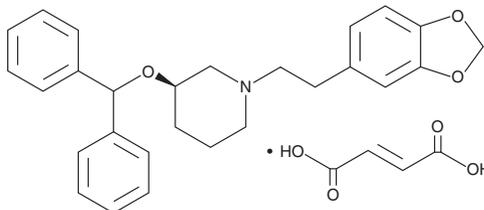
# PRODUCT INFORMATION



## Zamifenacin (fumarate)

Item No. 32848

**CAS Registry No.:** 127308-98-9  
**Formal Name:** (3R)-1-[2-(1,3-benzodioxol-5-yl)ethyl]-3-(diphenylmethoxy)-piperidine, (2E)-2-butenedioate  
**Synonym:** UK 76654  
**MF:** C<sub>27</sub>H<sub>29</sub>NO<sub>3</sub> • C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>  
**FW:** 531.6  
**Purity:** ≥98%  
**Supplied as:** A 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

Zamifenacin (fumarate) is supplied as a solid. A stock solution may be made by dissolving the zamifenacin (fumarate) in the solvent of choice, which should be purged with an inert gas. Zamifenacin (fumarate) is soluble in organic solvents such as ethanol and DMSO. The solubility of zamifenacin (fumarate) in these solvents is approximately 20 and 50 mg/ml, respectively.

### Description

Zamifenacin is an antagonist of M<sub>3</sub> muscarinic acetylcholine receptors (K<sub>i</sub> = 10 nM for the human receptor).<sup>1</sup> It is selective for M<sub>3</sub> over M<sub>1</sub>, M<sub>2</sub>, M<sub>4</sub>, and M<sub>5</sub> receptors in radioligand binding assays using cells expressing recombinant human receptors (K<sub>i</sub>s = 55, 153, 68, and 34 nM, respectively). Zamifenacin inhibits cholecystokinin-induced small bowel motility (ED<sub>50</sub> = 0.9 mg/kg) but does not increase heart rate (ED<sub>150</sub> = 80.0 mg/kg) in dogs.<sup>2</sup>

### References

1. Moriya, H., Takagi, Y., Nakanishi, T., *et al.* Affinity profiles of various muscarinic antagonists for cloned human muscarinic acetylcholine receptor (mAChR) subtypes and mAChRs in rat heart and submandibular gland. *Life Sci.* **64**(25), 2351-2358 (1999).
2. Wallis, R.M. Pre-clinical and clinical pharmacology of selective muscarinic M<sub>3</sub> receptor antagonists. *Life Sci.* **56**(11-12), 861-868 (1995).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/24/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM