

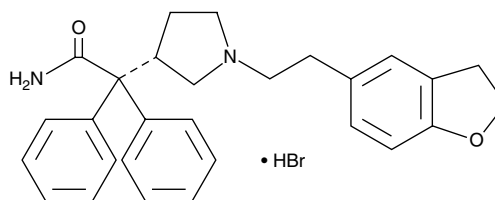
# Product Information



## Darifenacin (hydrobromide)

Item No. 14424

**CAS Registry No.:** 133099-07-7  
**Formal Name:** 1-[2-(2,3-dihydro-5-benzofuranyl)ethyl]-  
 $\alpha,\alpha$ -diphenyl-3-pyrrolidineacetamide,  
monohydrobromide  
**Synonym:** UK 88525-04  
**MF:**  $C_{28}H_{30}N_2O_2 \cdot HBr$   
**FW:** 507.5  
**Purity:**  $\geq 95\%$   
**Stability:**  $\geq 2$  years at  $-20^\circ C$   
**Supplied as:** A crystalline solid  
**UV/Vis.:**  $\lambda_{max}$ : 205, 287 nm



### Laboratory Procedures

For long term storage, we suggest that darifenacin (hydrobromide) be stored as supplied at  $-20^\circ C$ . It should be stable for at least two years.

Darifenacin (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the darifenacin (hydrobromide) in the solvent of choice. Darifenacin (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of darifenacin (hydrobromide) in these solvents is approximately 0.3, 2, and 3 mg/ml, respectively.

Darifenacin (hydrobromide) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, darifenacin (hydrobromide) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Darifenacin (hydrobromide) 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.

Darifenacin is a receptor antagonist acting at the muscarinic receptors ( $K_i = 5.5, 47, 0.84, 8.6,$  and  $2.3$  nM for  $M_1$  through  $M_5$ , respectively).<sup>1,2</sup> It is effective in treating problems related to the lower urinary tract, including incontinence and overactive bladder.<sup>3,4</sup>

### References

1. Bockman, C.S., Bradley, M.E., Dang, H.K., *et al.* Molecular and pharmacological characterization of muscarinic receptor subtypes in a rat parotid gland cell line: Comparison with native parotid gland. *J. Pharmacol. Exp. Ther.* **297**(2), 718-726 (2001).
2. Sagara, Y., Sagara, T., Mase, T., *et al.* Cyclohexylmethylpiperidinyltriphenylpropioamide: A selective muscarinic  $M_3$  antagonist discriminating against the other receptor subtypes. *J. Med. Chem.* **45**(4), 984-987 (2002).
3. Yamada, S., Ito, Y., and Tsukada, H.  $\alpha_1$ -Adrenoceptors and muscarinic receptors in voiding function - binding characteristics of therapeutic agents in relation to the pharmacokinetics. *Br. J. Clin. Pharmacol.* **72**(2), 205-217 (2011).
4. Lam, S. and Hilas, O. Pharmacologic management of overactive bladder. *Clin. Interv. Aging* **2**(3), 337-345 (2007).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14424](http://www.caymanchem.com/catalog/14424)

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

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