

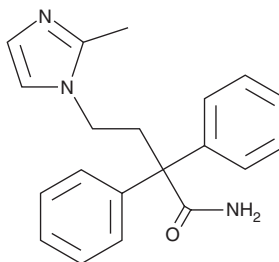
# PRODUCT INFORMATION



## Imidafenacin

Item No. 37420

**CAS Registry No.:** 170105-16-5  
**Formal Name:** 2-methyl- $\alpha,\alpha$ -diphenyl-1H-imidazole-1-butanamide  
**Synonyms:** KRP 197, ONO-8025  
**MF:**  $C_{20}H_{21}N_3O$   
**FW:** 319.4  
**Purity:**  $\geq 98\%$   
**Supplied as:** A solid  
**Storage:**  $-20^{\circ}\text{C}$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Imidafenacin is supplied as a solid. A stock solution may be made by dissolving the imidafenacin in the solvent of choice, which should be purged with an inert gas. Imidafenacin is slightly soluble in DMSO and dimethyl formamide.

### Description

Imidafenacin is an antagonist of muscarinic acetylcholine receptors (mAChRs;  $K_i$ s = 7.55, 22.6, 1.42, 8.86, and 2.63 nM, respectively, for recombinant human  $M_1$ - $M_5$  receptors).<sup>1</sup> It binds to isolated guinea pig bladders ( $K_b$  = 0.813 nM) and inhibits ACh release from isolated rat bladders ( $IC_{50}$  = 0.747 nM). Imidafenacin (10-300  $\mu\text{g/kg}$ ) reduces urine volume in orally water-loaded rats.<sup>2</sup> Formulations containing imidafenacin have been used in the treatment of overactive bladder.

### References

1. Kobayashi, F., Yageta, Y., Segawa, M., *et al.* Effects of imidafenacin (KRP-197/ONO-8025), a new anti-cholinergic agent, on muscarinic acetylcholine receptors. High affinities for  $M_3$  and  $M_1$  receptor subtypes and selectivity for urinary bladder over salivary gland. *Arzneimittelforschung* **57**(2), 92-100 (2007).
2. Yamazaki, T., Fukata, A., and Muraki, Y. Imidafenacin exerts the antidiuretic effect by enhancing vasopressin-related responses in orally water-loaded rats. *Eur. J. Pharmacol.* **791**, 72-77 (2016).

#### 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, 09/28/2023

#### 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](http://WWW.CAYMANCHEM.COM)