

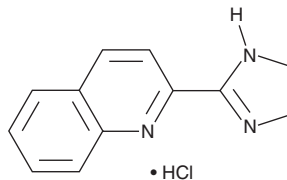
# PRODUCT INFORMATION



## BU 224 (hydrochloride)

Item No. 42451

CAS Registry No.: 205437-64-5  
Formal Name: 2-(4,5-dihydro-1H-imidazol-2-yl)-quinoline, monohydrochloride  
MF:  $C_{12}H_{11}N_3 \cdot HCl$   
FW: 233.7  
Purity:  $\geq 95\%$   
Supplied as: A solid  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

BU 224 (hydrochloride) is supplied as a solid. Aqueous solutions of BU 224 (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. BU 224 (hydrochloride) is soluble ( $\geq 10$  mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

BU 224 is an agonist of the imidazoline  $I_1$  and  $I_2$  receptors.<sup>1</sup> It selectively binds to imidazoline  $I_1$  and  $I_2$  receptors over  $\alpha_2$ -adrenergic receptors ( $\alpha_2$ -ARs;  $IC_{50}$ s = 0.034, 0.026, and 15  $\mu$ M, respectively). BU 224 (10 and 17.8 mg/kg) reduces complete Freund's adjuvant-induced thermal and mechanical hyperalgesia in rats.<sup>2</sup> It decreases the latency to seizure onset and increases the percentage of animals with grade V seizures to a greater extent in female than male mice.<sup>3</sup> BU 224 (5 mg/kg) reverses cognitive deficits in the 5XFAD transgenic mouse model of Alzheimer's disease.<sup>4</sup>

### References

1. Flamez, A., De Backer, J.P., Czerwiec, E., *et al.* Pharmacological characterization of  $I_1$  and  $I_2$  imidazoline receptors in human striatum. *Neurochem. Int.* **30(1)**, 25-29 (1997).
2. Li, J.-X., Thorn, D.A., Qiu, Y., *et al.* Antihyperalgesic effects of imidazoline  $I_2$  receptor ligands in rat models of inflammatory and neuropathic pain. *Br. J. Pharmacol.* **171(6)**, 1580-1590 (2014).
3. Min, J.-W., Peng, B.-W., He, X., *et al.* Gender difference in epileptogenic effects of 2-BFI and BU224 in mice. *Eur. J. Pharmacol.* **718(1-3)**, 81-86 (2013).
4. Mirzaei, N., Mota, B.C., Birch, A.M., *et al.* Imidazoline ligand BU224 reverses cognitive deficits, reduces microgliosis and enhances synaptic connectivity in a mouse model of Alzheimer's disease. *Br. J. Pharmacol.* **178(3)**, 654-671 (2021).

#### 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, 11/27/2024

#### 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