

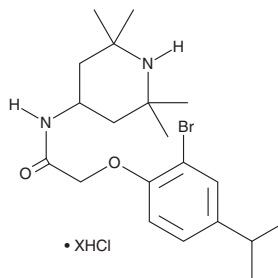
PRODUCT INFORMATION



VU0134992 (hydrochloride)

Item No. 37299

Formal Name: 2-[2-bromo-4-(1-methylethyl)phenoxy]-N-(2,2,6,6-tetramethyl-4-piperidiny)-acetamide, hydrochloride
MF: C₂₀H₃₁BrN₂O₂ • XHCl
FW: 411.4
Purity: ≥95%
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

VU0134992 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the VU0134992 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. VU0134992 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of VU0134992 (hydrochloride) in these solvents is approximately 1 and 2 mg/ml, respectively.

Description

VU0134992 is an inhibitor of inward-rectifier potassium channel 4.1 ($K_{ir}4.1$; $IC_{50} = 5.2 \mu\text{M}$ in a thallium flux assay).¹ It is selective for $K_{ir}4.1$ over $K_{ir}2.3$, $K_{ir}7.1$, and SUR1/ $K_{ir}6.2$ (IC_{50} s = 13.2, 34.2, and 11.4 μM , respectively), as well as $K_{ir}1.1$, $K_{ir}2.1$, and $K_{ir}2.2$ at 30 μM , but also inhibits $K_{ir}4.2$, heteromeric GIRK1/GIRK2, also known as $K_{ir}3.1/K_{ir}3.2$, and heteromeric GIRK1/GIRK4 (IC_{50} s = 8.1, 2.5, and 3.1 μM , respectively). VU0134992 (5 μM) reduces polymyxin B-induced decreases in cell viability in HK-2 human kidney tubular cells and prevents polymyxin B-induced increases in apoptosis in mouse embryonic kidney explant cultures.² *In vivo*, VU0134992 (50 and 100 mg/kg) increases urine volume and urinary sodium and potassium levels in rats.¹

References

1. Kharade, S.V., Kurata, H., Bender, A.M., *et al.* Discovery, characterization, and effects on renal fluid and electrolyte excretion of the Kir4.1 potassium channel pore blocker, VU0134992. *Mol. Pharmacol.* **94**(2), 926-937 (2018).
2. Lu, J., Azad, M.A.K., Moreau, J.L.M., *et al.* Inwardly rectifying potassium channels mediate polymyxin-induced nephrotoxicity. *Cell. Mol. Life Sci.* **79**(6), 296 (2022).

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, 08/18/2023

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