

PRODUCT INFORMATION



NT-0796

Item No. 41237

CAS Registry No.: 2272917-13-0
Formal Name: (αR)-α-[[[(1,2,3,5,6,7-hexahydro-s-indacen-4-yl)amino]carbonyl]oxy]-2-pyrimidinepropanoic acid, 1-methylethyl ester

MF: C₂₃H₂₇N₃O₄

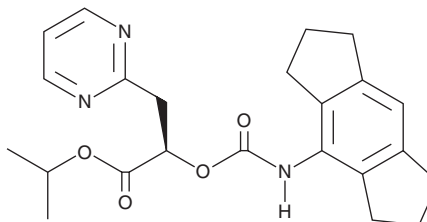
FW: 409.5

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

NT-0796 is supplied as a solid. A stock solution may be made by dissolving the NT-0796 in the solvent of choice, which should be purged with an inert gas. NT-0796 is slightly soluble (0.1-1 mg/ml) in acetonitrile and sparingly soluble (1-10 mg/ml) in DMSO.

Description

NT-0796 is an inhibitor of the NOD-like receptor protein 3 (NLRP3) inflammasome and a prodrug form of NDT-19795.¹ It selectively inhibits NLRP3 over NLR family CARD domain-containing protein 4 (NLRC4) at 3 nM, as well as a panel of 121 other receptors at 10 μM, but does not inhibit the serotonin (5-HT) receptor subtype 5-HT_{2B} by 90% at 10 μM. NT-0796 inhibits LPS- and ATP-induced IL-1β release in isolated human peripheral blood mononuclear cells (PBMCs) and whole blood (IC₅₀s = 0.32 and 6.8 nM, respectively), however, it does not affect LPS-induced TNF-α or IL-6 release in isolated human PBMCs (IC₅₀s = >2 μM for both), indicating NLRP3 selectivity. It decreases body weight, food intake, and plasma levels of total cholesterol, HDL, and proprotein convertase subtilisin kexin type 9 (PCSK9) in a model of high-fat diet-induced obesity using transgenic mice expressing human carboxylesterase-1 (CES1), the enzyme that converts NT-0796 to NDT-19795, when administered at a dose of 100 mg/kg three times per day.²

References

- Harrison, D., Billinton, A., Bock, M.G., *et al.* Discovery of clinical candidate NT-0796, a brain-penetrant and highly potent NLRP3 inflammasome inhibitor for neuroinflammatory disorders. *J. Med. Chem.* **66(21)**, 14897-14911 (2023).
- Thornton, P., Reader, V., Digby, Z., *et al.* Reversal of high fat diet-induced obesity, systemic inflammation, and astrogliosis by the NLRP3 inflammasome inhibitors NT-0249 and NT-0796. *J. Pharmacol. Exp. Ther.* **388(3)**, 813-826 (2024).

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, 07/26/2024

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