

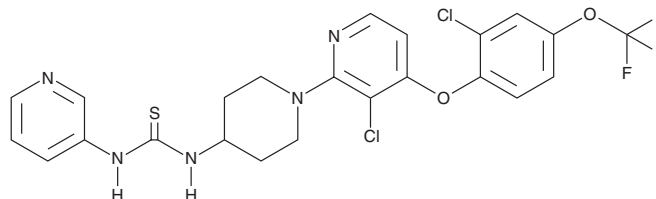
PRODUCT INFORMATION



DO264

Item No. 29402

CAS Registry No.: 2301866-59-9
Formal Name: N-[1-[3-chloro-4-[2-chloro-4-(trifluoromethoxy)phenoxy]-2-pyridinyl]-4-piperidinyl]-N'-3-pyridinyl-thiourea
MF: C₂₃H₂₀Cl₂F₃N₅O₂S
FW: 558.4
Purity: ≥98%
UV/Vis.: λ_{max}: 259 nm
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

DO264 is supplied as a solid. A stock solution may be made by dissolving the DO264 in the solvent of choice, which should be purged with an inert gas. DO264 is soluble in DMSO.

Description

DO264 is an inhibitor of α/β -hydrolase domain-containing protein 12 (ABHD12; IC₅₀ = 11 nM).¹ It inhibits ABHD12-dependent hydrolysis of lysophosphatidylserine (lyso-PS) in mouse brain membrane lysates (IC₅₀ = 2.8 nM) and human THP-1 cells.² DO264 increases levels of chemokine (C-C motif) ligand 3 (CCL3), CCL4, TNF- α , and IL-1 β in M1-polarized THP-1 macrophages.¹ It potentiates ferroptotic cell death induced by the glutathione peroxidase 4 (GPX4) inhibitor RSL3 in HT1080 fibrosarcoma and SU-DHL-5 B cell lymphoma cells when used at a concentration of 1 μ M.^{45704,49606} *In vivo*, DO264 (30 mg/kg per day for four weeks) increases levels of 1-stearoyl-2-hydroxy-*sn*-glycero-3-PS, 1-arachidonoyl-2-hydroxy-*sn*-glycero-3-PS, 1-docosanoyl-2-hydroxy-*sn*-glycero-3-PS, 1-stearoyl-2-arachidonoyl-*sn*-glycero-3-PS, and 1-oleoyl-2-arachidonoyl-*sn*-glycero-3-PS in mouse brain.² It increases levels of CCL2, CCL3, and CCL5 in bronchoalveolar lavage fluid (BALF) and decreases survival in a mouse model of infection with lymphocytic choriomeningitis virus (LCMV) clone 13 when administered at a dose of 30 mg/kg.

References

- Ogasawara, D., Ichu, T.-A., Jing, H., *et al.* Discovery and optimization of selective and *in vivo* active inhibitors of the lysophosphatidylserine lipase α/β -hydrolase domain-containing 12 (ABHD12). *J. Med. Chem.* **62**(3), 1643-1656 (2019).
- Ogasawara, D., Ichu, T.-A., Vartabedian, V.F., *et al.* Selective blockade of the lyso-PS lipase ABHD12 stimulates immune responses *in vivo*. *Nat. Chem. Biol.* **14**(12), 1099-1108 (2018).

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.

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