

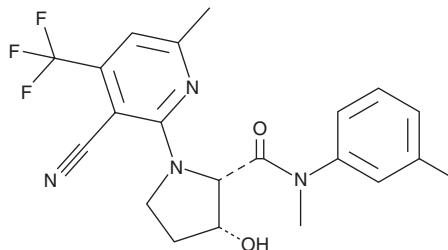
PRODUCT INFORMATION



ART558

Item No. 42324

CAS Registry No.: 2603528-97-6
Formal Name: (2S,3R)-1-[3-cyano-6-methyl-4-(trifluoromethyl)-2-pyridinyl]-3-hydroxy-N-methyl-N-(3-methylphenyl)-2-pyrrolidinecarboxamide
MF: C₂₁H₂₁F₃N₄O₂
FW: 418.4
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

ART558 is supplied as a solid. A stock solution may be made by dissolving the ART558 in the solvent of choice, which should be purged with an inert gas. ART558 is soluble (≥10 mg/ml) in DMSO. ART558 is sparingly soluble (1-10 mg/ml) in ethanol.

Description

ART558 is an inhibitor of DNA polymerase θ (Pol θ ; IC₅₀ = 7.9 nM for Pol θ polymerase activity).^{1,2} It is selective for the polymerase activity of Pol θ over its ATPase activity (IC₅₀ = >12 μ M).¹ ART558 (0.1, 0.3, and 1 μ M) inhibits the repair of DNA double-strand breaks via theta-mediated end joining (TMEJ), but not non-homologous end joining (NHEJ), in a reporter assay using an extrachromosomal DNA substrate.² It induces synthetic lethality in RPE1 cells lacking BRCA1 and DLD-1 cells lacking BRCA2. ART558 also reduces tumor growth in a 3D organoid culture model using cells derived from patients with BRCA1-low, 53BP1-low prostate cancer.

References

1. Stockley, M.L., Benedetti, G., Blencowe, P., *et al.* Discovery, characterization, and structure-based optimization of small-molecule in vitro and in vivo probes for human DNA polymerase theta. *J. Med. Chem.* **65**, 13879-13891 (2022).
2. Zatreanu, D., Robinson, H.M.R., Alkhatib, O., *et al.* Pol θ inhibitors elicit BRCA-gene synthetic lethality and target PARP inhibitor resistance. *Nat. Commun.* **12**(1), 3636 (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.

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