

PRODUCT INFORMATION



PNU 159682

Item No. 37370

CAS Registry No.: 202350-68-3

Formal Name: (8S,10S)-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(2-hydroxyacetyl)-1-methoxy-10-[[[(1S,3R,4aS,9S,9aR,10aS)-octahydro-9-methoxy-1-methyl-1H-pyrano[4',3':4,5]oxazolo[2,3-c][1,4]oxazin-3-yl]oxy]-5,12-naphthacenedione

MF: C₃₂H₃₅NO₁₃

FW: 641.6

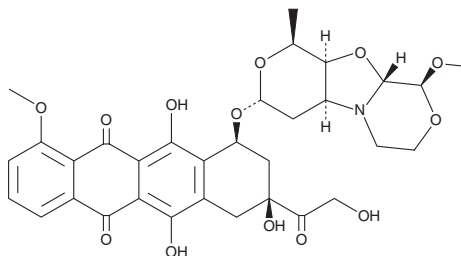
Purity: ≥95%

UV/Vis.: λ_{max}: 235, 252, 481, 496 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

PNU 159682 is supplied as a solid. A stock solution may be made by dissolving the PNU 159682 in the solvent of choice, which should be purged with an inert gas. PNU 159682 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PNU 159682 in these solvents is approximately 30 mg/ml.

Description

PNU 159682 is an anthracycline and active metabolite of the anticancer agent nemorubicin.¹ It is formed from nemorubicin by the cytochrome P450 (CYP) isoform CYP3A4. PNU 159682 forms DNA adducts and inhibits the proliferation of several cancer cell lines (IC₅₀s = 0.075-0.577 nM).^{1,2} It reduces tumor volume in an MX-1 breast cancer mouse xenograft model when administered at a dose of 4 µg/kg.¹ PNU 159682 has also been used in the synthesis of cytotoxic payload moieties of antibody-drug conjugates (ADCs).³

References

1. Quintieri, L., Geroni, C., Fantin, M., *et al.* Formation and antitumor activity of PNU-159682, a major metabolite of nemorubicin in human liver microsomes. *Clin. Cancer Res.* **11**(4), 1608-1617 (2005).
2. Scalabrin, M., Quintieri, L., Palumbo, M., *et al.* Virtual cross-linking of the active nemorubicin metabolite PNU-159682 to double-stranded DNA. *Chem. Res. Toxicol.* **30**(2), 614-624 (2017).
3. Holte, D., Lyssikatos, J.P., Valdiosera, A.M., *et al.* Evaluation of PNU-159682 antibody drug conjugates (ADCs). *Bioorg. Med. Chem. Lett.* **30**(24), 127640 (2020).

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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