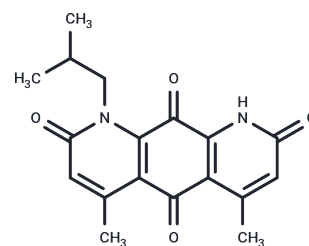


Isobutyl-deoxynyboquinone

Chemical Properties

CAS No. :	1430798-22-3
Formula:	C ₁₈ H ₁₈ N ₂ O ₄
Molecular Weight:	326.352
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Isobutyl-deoxynyboquinone (IB-DNQ) is a selective substrate for NAD(P)H: quinone oxidoreductase (NQO1) and is utilized in anticancer research.
In vitro	Isobutyl-deoxynyboquinone, at concentrations ranging from 0.01 to 100 μ M, shows increased cytotoxic effectiveness against the SCCF1 and SCCF2 cell lines, with reduced potency in SCCF3 cells. Additionally, when applied to SCCF1 cells at doses between 0.1 to 3 μ M for 60 minutes, it demonstrates dose-dependent cytotoxicity[1].
In vivo	Isobutyl-deoxynyboquinone, administered intravenously (i.v.) at dosages ranging from 0.5 to 2 mg/kg over a 20-hour period, successfully reaches average peak plasma concentrations in cats. Similarly, a dosage of 1 mg/kg administered orally (p.o.) attains peak plasma concentrations after 4 hours in the same animal model. Both administration routes and dosages were part of a pharmacokinetic analysis, indicating the compound's effective concentration levels in the blood following different methods of administration.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0642 mL	15.321 mL	30.6419 mL
5 mM	0.6128 mL	3.0642 mL	6.1284 mL
10 mM	0.3064 mL	1.5321 mL	3.0642 mL
50 mM	0.0613 mL	0.3064 mL	0.6128 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Lundberg AP, et al. Pharmacokinetics and derivation of an anticancer dosing regimen for the novel anti-cancer agent isobutyl-deoxynyboquinone (IB-DNQ), a NQO1 bioactivatable molecule, in the domestic felid species. Invest

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