

## DNA-PK-IN-8

## Chemical Properties

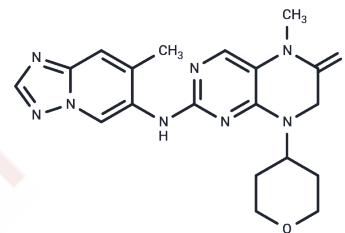
CAS No. : 2823369-81-7

Formula: C<sub>19</sub>H<sub>22</sub>N<sub>8</sub>O<sub>2</sub>

Molecular Weight: 394.43

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	DNA-PK-IN-8 is a potent, selective, and orally active inhibitor of DNA-dependent protein kinase (DNA-PK) with an IC <sub>50</sub> value of 0.8 nM, demonstrating synergistic antiproliferative effects across various cancer cell lines and significantly reducing HL-60 tumor growth when combined with Doxorubicin [1].
Targets(IC50)	Others,DNA-PK
In vitro	DNA-PK-IN-8 (compound DK1) effectively reduces γH2A.X expression in a concentration-dependent manner in HCT-116 cells at 1, 5, and 10 μM after 6 hours of incubation, following Bleomycin pre-treatment, as confirmed by immunofluorescence analysis [1].
In vivo	DNA-PK-IN-8, administered orally at a dose of 100 mg/kg daily for 16 days, significantly inhibited HL-60 tumor growth in nude mice when used in conjunction with Doxorubicin, demonstrating tumor growth inhibition (TGI) values of 52.4% and 62.4% for tumor weight and volume, respectively. Additionally, a single oral dose of DNA-PK-IN-8 at 5 mg/kg in Sprague-Dawley rats revealed favorable pharmacokinetic properties, both in vitro and in vivo, supporting its potential as an oral therapeutic candidate. The pharmacokinetic analysis in Sprague-Dawley rats showed a maximum plasma concentration (C <sub>max</sub> ) of 810 ± 122.32 ng/mL, achieved at a median time (T <sub>max</sub> ) of 0.42 ± 0.11 hours, with a half-life (t <sub>1/2</sub> ) of 1.59 ± 0.26 hours and an area under the curve (AUC 0-∞) of 3598.7 ± 769.81 ng/mL·h, indicating its reasonable pharmacokinetic profile.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.5353 mL	12.6765 mL	25.353 mL
5 mM	0.5071 mL	2.5353 mL	5.0706 mL
10 mM	0.2535 mL	1.2677 mL	2.5353 mL
50 mM	0.0507 mL	0.2535 mL	0.5071 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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