

# PRODUCT INFORMATION



## Plk1-IN-4

Item No. 45382

CAS Registry No.: 2622273-55-4

Formal Name: 3-[[[2-[[1-[2-(dimethylamino)acetyl]-2,3-dihydro-5-methoxy-1H-indol-6-yl]amino]-5-(trifluoromethyl)-4-pyrimidinyl]amino]-2-thiophenecarboxylic acid, methyl ester

Synonyms: Polo-like Kinase 1-IN-4,  
Polo-like Kinase 1 Inhibitor 4

MF: C<sub>24</sub>H<sub>25</sub>F<sub>3</sub>N<sub>6</sub>O<sub>4</sub>S

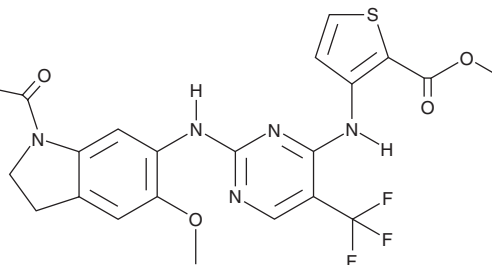
FW: 550.6

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

Plk1-IN-4 is supplied as a solid. A stock solution may be made by dissolving the Plk1-IN-4 in the solvent of choice, which should be purged with an inert gas. Plk1-IN-4 is slightly soluble (0.1-1 mg/ml) in acetonitrile.

### Description

Plk1-IN-4 is an inhibitor of polo-like kinase 1 (Plk1; IC<sub>50</sub> = 0.508 nM in a cell-free assay).<sup>1</sup> It inhibits the growth of HepG2 and SMMC-7721 hepatocellular carcinoma cells (IC<sub>50</sub>s = 11.1 and 70.9 nM, respectively) and induces cell cycle arrest at the G<sub>2</sub>/M phase and apoptosis in HepG2 cells. Plk1-IN-4 (30 mg/kg) reduces tumor growth in a HepG2 mouse xenograft model. It also has antiplasmodial activity against *P. falciparum* (EC<sub>50</sub> = 2.8 μM).<sup>2</sup>

### References

- Deng, Z., Chen, G., Liu, S., *et al.* Discovery of methyl 3-((2-((1-(dimethylglycyl)-5-methoxyindolin-6-yl)amino)-5-(trifluoro-methyl) pyrimidin-4-yl)amino)thiophene-2-carboxylate as a potent and selective polo-like kinase 1 (PLK1) inhibitor for combating hepatocellular carcinoma. *Eur. J. Med. Chem.* **206**, 112697 (2020).
- Bohmer, M.J., Wang, J., Istvan, E.S., *et al.* Human polo-like kinase inhibitors as antiplasmodials. *ACS Infect. Dis.* **9(4)**, 1004-1021 (2023).

#### 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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