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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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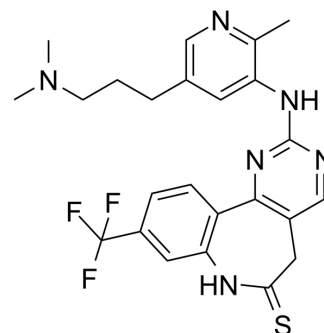
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MLN0905

Cat. No.:	HY-15155		
CAS No.:	1228960-69-7		
Molecular Formula:	C ₂₄ H ₂₅ F ₃ N ₆ S		
Molecular Weight:	486.56		
Target:	Polo-like Kinase (PLK)		
Pathway:	Cell Cycle/DNA Damage		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (61.66 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.0552 mL	10.2762 mL	20.5525 mL
	5 mM	0.4110 mL	2.0552 mL	4.1105 mL
	10 mM	0.2055 mL	1.0276 mL	2.0552 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (5.14 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.14 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MLN0905 is a potent, orally active Polo-like kinase 1 (PLK1) inhibitor. MLN0905 has inhibitory potency against PLK1 with an IC₅₀ value of 2 nM. MLN0905 can be used for the research of cancer^{[1][2]}.

IC₅₀ & Target

PLK1
2 nM (IC₅₀)

In Vitro	<p>MLN0905 (compound 12c) has inhibitory potency against PLK1 with an IC₅₀ value of 2 nM^[1]. MLN0905 exhibits potent activities for Cdc25C with an EC₅₀ value of 33 nM^[1]. MLN0905 shows inhibitory effects on HT29, HCT116, H460, and A375 cell lines with LD₅₀ values of 22 nM, 56 nM, 89 nM and 34 nM, respectively^[1]. MLN0905 (125 nM) shows strong mitotic arrest and monopolar spindle formation in HT-29 cells^[1]. MLN0905 suppresses the growth of lymphoma cell lines with IC₅₀ values ranging from 3 - 24 nM^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>MLN0905 (p.o.; 50 mg/kg) shows a high sustained PD response in nude mice HT29 xenograft tumors^[1]. MLN0905 (p.o.; 6.25, 12.5, 25, 50 mg/kg) exhibits significant antitumor activities in mice HT29 xenograft tumors^[1]. MLN0905 (p.o.; 0-14.5 mg/kg; daily, QD×3/week) has marked antitumor effects in kinds of lymphoma xenograft model^{[1][2]}. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="345 552 1515 785"> <tr> <td>Animal Model:</td> <td>Tumor (HT29) xenograft model^[1]</td> </tr> <tr> <td>Dosage:</td> <td>0-50 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>P.O; daily, QD×3/week</td> </tr> <tr> <td>Result:</td> <td>Observed antitumor activity, tumor stasis or regression and well-tolerated oral doses.</td> </tr> </table>	Animal Model:	Tumor (HT29) xenograft model ^[1]	Dosage:	0-50 mg/kg	Administration:	P.O; daily, QD×3/week	Result:	Observed antitumor activity, tumor stasis or regression and well-tolerated oral doses.
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Dosage:	0-50 mg/kg								
Administration:	P.O; daily, QD×3/week								
Result:	Observed antitumor activity, tumor stasis or regression and well-tolerated oral doses.								

CUSTOMER VALIDATION

- Theranostics. 2022; 12(8): 3911-3927.
- Cell Death Dis. 2023 Oct 23;14(10):695.
- PLoS Negl Trop Dis. 2016 Jan 11;10(1):e0004356.
- Department of Pathology. University of California. 2016.

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REFERENCES

- [1]. Duffey MO, et al. Discovery of a potent and orally bioavailable benzolactam-derived inhibitor of Polo-like kinase 1 (MLN0905). J Med Chem. 2012 Jan 12;55(1):197-208.
- [2]. Shi JQ, et al. MLN0905, a small-molecule plk1 inhibitor, induces antitumor responses in human models of diffuse large B-cell lymphoma. Mol Cancer Ther. 2012 Sep;11(9):2045-53.

Caution: Product has not been fully validated for medical applications. For research use only.

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