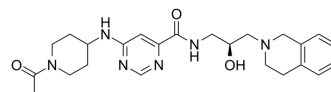


## GSK3326595

<b>Cat. No.:</b>	HY-101563												
<b>CAS No.:</b>	1616392-22-3												
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>32</sub> N <sub>6</sub> O <sub>3</sub>												
<b>Molecular Weight:</b>	452.55												
<b>Target:</b>	Histone Methyltransferase; SARS-CoV; MDM-2/p53; CDK; Apoptosis												
<b>Pathway:</b>	Epigenetics; Anti-infection; Apoptosis; Cell Cycle/DNA Damage												
<b>Storage:</b>	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>2 years</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 year</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	2 years		-20°C	1 year
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	4°C	2 years											
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	-20°C	1 year											



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 62.5 mg/mL (138.11 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.2097 mL	11.0485 mL	22.0970 mL
5 mM	0.4419 mL	2.2097 mL	4.4194 mL
10 mM	0.2210 mL	1.1049 mL	2.2097 mL

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

#### In Vivo

- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline  
Solubility: ≥ 2.5 mg/mL (5.52 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: 2.08 mg/mL (4.60 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.08 mg/mL (4.60 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (4.60 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

GSK3326595 is a protein arginine methyltransferase 5 (PRMT5) inhibitor. GSK3326595 decreases SARS-CoV-2 infection, inhibits cancer cell proliferation and induces pro-inflammatory macrophage polarization and increases hepatic triglyceride levels without affecting atherosclerosis. GSK3326595 can be used for research of relapsed/refractory mantle cell lymphoma

[1][2][3][4][5]

IC <sub>50</sub> & Target	PRMT5	CDK4	CDK6		
<b>In Vitro</b>	<p>GSK3326595 (10-100 nM, 24-72 h) inhibits SARS-CoV-2spike pseudovirus infection HEK-293 cells and A549 cells by attenuating ACE2-RBD interaction<sup>[1]</sup>.</p> <p>GSK3326595 (100 nM, 12 h) primes peritoneal macrophages to IFN-gamma-induced M1 polarization<sup>[3]</sup>.</p> <p>GSK3326595 (0.15-10 μM, 72 h) induces cell death in MCL cell<sup>[4]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[4]</sup></p>				
	<table border="1"> <tr> <td>Cell Line:</td> <td>HEK-293T cells, A549 cells</td> </tr> </table>			Cell Line:	HEK-293T cells, A549 cells
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	<table border="1"> <tr> <td>Concentration:</td> <td>10 nM, 25 nM, 50 nM, 100 nM</td> </tr> </table>			Concentration:	10 nM, 25 nM, 50 nM, 100 nM
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	<table border="1"> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> </table>			Incubation Time:	48 h
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	<table border="1"> <tr> <td>Result:</td> <td>Strongly inhibited ACE2-RBD interaction at low concentration. Inhibited SARS-CoV-2 Omicron and other variants Spike1 binding with ACE2. Inhibits SARS-CoV-2 spike pseudovirus infection host cells.</td> </tr> </table>			Result:	Strongly inhibited ACE2-RBD interaction at low concentration. Inhibited SARS-CoV-2 Omicron and other variants Spike1 binding with ACE2. Inhibits SARS-CoV-2 spike pseudovirus infection host cells.
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	<p>Cell Cytotoxicity Assay<sup>[1]</sup></p>				
<table border="1"> <tr> <td>Cell Line:</td> <td>MCL cells</td> </tr> </table>			Cell Line:	MCL cells	
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<table border="1"> <tr> <td>Concentration:</td> <td>0.15 μM, 0.3 μM, 0.6 μM, 1.25 μM, 2.5 μM, 5 μM, 10 μM</td> </tr> </table>			Concentration:	0.15 μM, 0.3 μM, 0.6 μM, 1.25 μM, 2.5 μM, 5 μM, 10 μM	
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<table border="1"> <tr> <td>Result:</td> <td>Resulted in modest growth inhibition in MCL cells.</td> </tr> </table>			Result:	Resulted in modest growth inhibition in MCL cells.	
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<b>In Vivo</b>	<p>GSK3326595 (5 mg/kg, Intraperitoneal injection, three times a week for 9 weeks) increased hepatic triglyceride levels without affecting atherosclerosis in LDL receptor knockout mice<sup>[3]</sup>. GSK3326595 (25-50 mg/kg, Oral, once a day for 2 weeks) enhances the efficacy of anti-programed cell death protein 1 (PD-1) immune checkpoint therapy (ICT) in hepatocellular carcinoma (HCC) in myelocytomatosis transgene turned on (MYC-ON) mice<sup>[5]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>				
	<table border="1"> <tr> <td>Animal Model:</td> <td>LDL receptor knockout mice<sup>[3]</sup></td> </tr> </table>			Animal Model:	LDL receptor knockout mice <sup>[3]</sup>
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	<table border="1"> <tr> <td>Dosage:</td> <td>5 mg/kg</td> </tr> </table>			Dosage:	5 mg/kg
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	<table border="1"> <tr> <td>Administration:</td> <td>Intraperitoneal injection (i.p.)</td> </tr> </table>			Administration:	Intraperitoneal injection (i.p.)
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	<table border="1"> <tr> <td>Result:</td> <td>Did not alter atherosclerosis susceptibility. Increased hepatic triglyceride levels without changing the hyperlipidemia extent. Activated genes involved in fatty acid acquisition.</td> </tr> </table>			Result:	Did not alter atherosclerosis susceptibility. Increased hepatic triglyceride levels without changing the hyperlipidemia extent. Activated genes involved in fatty acid acquisition.
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<table border="1"> <tr> <td>Dosage:</td> <td>25 mg/kg, 50 mg/kg</td> </tr> </table>			Dosage:	25 mg/kg, 50 mg/kg	
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<table border="1"> <tr> <td>Administration:</td> <td>Oral</td> </tr> </table>			Administration:	Oral	
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<table border="1"> <tr> <td>Result:</td> <td>Significantly suppressed tumor growth at 50 mg/kg. Showed better therapeutic efficacy at 25 mg/kg.</td> </tr> </table>			Result:	Significantly suppressed tumor growth at 50 mg/kg. Showed better therapeutic efficacy at 25 mg/kg.	
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## CUSTOMER VALIDATION

- Nat Commun. 2021 Jun 8;12(1):3444.
- J Exp Clin Cancer Res. 2022 Oct 5;41(1):293.
- EMBO Mol Med. 2023 Jul 17;e17248.
- Cell Mol Life Sci. 2023 Jan 17;80(2):43.
- Oncogene. 2021 Apr;40(15):2711-2724.

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## REFERENCES

- [1]. Li Z, et al. GSK3326595 is a promising drug to prevent SARS-CoV-2 Omicron and other variants infection by inhibiting ACE2-R671 di-methylation [J]. Journal of Medical Virology, 2023, 95(1): e28158.
- [2]. Fedoriw A, et al. Anti-tumor activity of the type I PRMT inhibitor, GSK3368715, synergizes with PRMT5 inhibition through MTAP loss [J]. Cancer cell, 2019, 36(1): 100-114. e25.
- [3]. Zhang Y, et al. PRMT5 inhibition induces pro-inflammatory macrophage polarization and increased hepatic triglyceride levels without affecting atherosclerosis in mice [J]. Journal of Cellular and Molecular Medicine, 2023, 27(8): 1056-1068.
- [4]. Che Y, et al. Exploiting PRMT5 as a target for combination therapy in mantle cell lymphoma characterized by frequent ATM and TP53 mutations [J]. Blood cancer journal, 2023, 13(1): 27.
- [5]. Luo Y, et al. Myelocytomatosis-protein arginine N-methyltransferase 5 Axis defines the tumorigenesis and immune response in hepatocellular carcinoma [J]. Hepatology, 2021, 74(4): 1932-1951.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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