G007-LK

Cat. No.:	HY-12438		
CAS No.:	1380672-07	-0	
Molecular Formula:	C ₂₅ H ₁₆ ClN ₇ O	³S	
Molecular Weight:	529.96		
Target:	PARP		
Pathway:	Cell Cycle/DNA Damage; Epigenetics		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year

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SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 30 mg/mL (56.61 mM) * "≥" means soluble, but saturation unknown.				
Preparing Stock Solutions		Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	1.8869 mL	9.4347 mL	18.8693 mL	
		5 mM	0.3774 mL	1.8869 mL	3.7739 mL
	10 mM	0.1887 mL	0.9435 mL	1.8869 mL	
	Please refer to the so	lubility information to select the app	propriate solvent.		
In Vivo	Solubility: 2.08 mg 2. Add each solvent o	one by one: 10% DMSO >> 90% (20 g/mL (3.92 mM); Suspended solution one by one: 10% DMSO >> 90% cor ng/mL (3.92 mM); Clear solution	; Need ultrasonic		

BIOLOGICAL ACTIV		
Description	G007-LK is a potent and selec	tive inhibitor of TNKS1 and TNKS2, with IC $_{50}$ s of 46 nM and 25 nM, respectively.
IC ₅₀ & Target	TNKS2 25 nM (IC ₅₀)	TNKS1 46 nM (IC ₅₀)
In Vitro	G007-LK shows no inhibition (0-20 μM) dose-dependently i	of TNKS1 and TNKS2, with IC ₅₀ s of 46 nM and 25 nM, respectively, and a cellular IC ₅₀ of 50 nM. of PARP1 at doses up to 20 μM, and has a high CYP3A4 inhibition IC ₅₀ value (>25 μM) ^[1] . G007-LK nhibits hepatocellular carcinoma (HCC) cell growth. G007-LK also downregulates the levels of and AMOTL2 in HCC cell lines. In addition, G007-LK (0-20 μM) synergizes with MEK and AKT

Product Data Sheet

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	inhibitors to suppress HCC cell proliferation ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	G007-LK displays great pharmacokinetic profile in ICR mice ^[1] . G007-LK (100 mg/kg chow, p.o.) significantly reduces lineage tracing from LGR5 ⁺ intestinal stem cells in mice. G007-LK (100 mg/kg chow, p.o.) specifically targets LGR5 ⁺ WNT-dependent intestinal stem cells in Lgr5-EGFP-CreERT2;R26R-tdTomato mice. G007-LK (10, 50 mg/kg, p.o.) also suppresses canonical WNT signalling. Furthermore, G007-LK (100, 1000 mg/kg chow, p.o) shows no effect on the alteration of duodenal morphology ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[3]	For cell proliferation or apoptosis assays, SNU-449 and HLE cells are grown in a 5% CO ₂ atmosphere, at 37°C, in RPMI Medium supplemented with 10% fetal bovine serum (FBS) and penicillin/streptomycin. HCC cells are treated with 0.1% DMSO, or 2.5 μM, 5 μM, 10 μM, 20μM XAV-939 or G007-LK, either alone or in combination with the MEK inhibitor U0126 (25 μ M) or the AKT inhibitor MK-2206 (5 μM). Cell proliferation is analyzed using the BrdU Cell Proliferation Assay Kit, while apoptosis is assessed with the Cell Death Detection Elisa Plus Kit ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration ^[2]	Drug treatment experiments are performed with wild type (wt), single or double transgenic Lgr5-EGFP-Ires-CreERT2;R26R-Confetti mice, unless indicated otherwise. G007-LK is administered orally either by gavage (10 or 50 mg/kg body mass once daily, vehicle: 15% dimethylsulfoxide [DMSO], 17.5% Cremophor EL, 8.75% Miglyol 810 N, 8.75% ethanol in phosphate buffered saline [PBS]) or in G007-LK enriched chow (100 or 1000 mg G007-LK/kg chow ad libitum, corresponding to a daily G007-LK dose of approximately 20 or 200 mg/kg body mass, respectively, for a mouse with a body mass of 25 g and consumption of approximately 5 g enriched diet/day). G007-LK treatments are initiated at the age of 5 weeks and 5 days for oral gavage treatment or 6 weeks for enriched chow administration and continued for 9 or 21 days, respectively ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cancer Discov. 2019 Oct;9(10):1358-1371.
- EMBO Mol Med. 2023 Jan 18;e16235.
- Int J Mol Sci. 2023 Apr 4, 24(7), 6733.
- Am J Cancer Res. 2022 Mar 15;12(3):1069-1087.
- Lab Invest. 2020 Jul;100(7):1003-1013.

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REFERENCES

[1]. Voronkov A, et al. Structural basis and SAR for G007-LK, a lead stage 1,2,4-triazole based specific tankyrase 1/2 inhibitor. J Med Chem. 2013 Apr 11;56(7):3012-23.

[2]. Norum JH, et al. The tankyrase inhibitor G007-LK inhibits small intestine LGR5+ stem cell proliferation without altering tissue morphology. Biol Res. 2018 Jan 9;51(1):3.

[3]. Xin Chen, et al. Tankyrase inhibitors suppress hepatocellular carcinoma cell growth via modulating the Hippo cascade. PLoS One. 2017 Sep 6;12(9):e0184068.

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

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