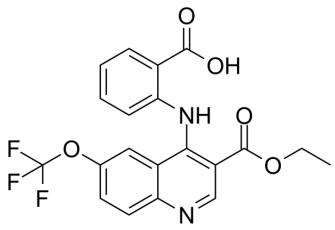
BCH001

Cat. No.:	HY-137817
CAS No.:	384859-58-9
Molecular Formula:	$C_{20}H_{15}F_3N_2O_5$
Molecular Weight:	420.34
Target:	DNA/RNA Synthesis
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 : 125 mg/mL (297.38 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3790 mL	11.8951 mL	23.7903 mL
	5 mM	0.4758 mL	2.3790 mL	4.7581 mL
	10 mM	0.2379 mL	1.1895 mL	2.3790 mL

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

BIOLOGICAL ACTIVITY

Description

BCH001, a quinoline derivative, is a specific PAPD5 inhibitor. BCH001 restores telomerase activity and telomere length in dyskeratosis congenita (DC) induced pluripotent stem cells. BCH001 shows no inhibition of poly(A)-specific ribonuclease (PARN) or several other canonical and non-canonical polynucleotide polymerases. BCH001 is used to regulate aging[1].

In Vitro

BCH001 (100 nM-1 μM; for 7 days) reduces telomerase RNA component (TERC) RNA oligo-adenylation and increases steady state TERC RNA levels in PARN-mutant iPSC clones. BCH001 causes few transcriptome-wide changes and rescues other ncRNAs disrupted by PARN mutations[1].

BCH001 (1 μM, 24-72 h) has no adverse impact on cell growth, cell cycle, or apoptosis in induced pluripotent stem cells (iPSCs) from DC[1].

BCH001 inhibits ATP- and dose-dependently recombinant PAPD5 (rPAPD5) in vitro. PAPD5 is a non-canonical polymerase that oligoadenylates and destabilizes telomerase RNA component (TERC)[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Neha Nagpal, et al. Small-Molecule PAPD5 Inhibitors Restore Telomerase Activity in Patient Stem Cells. Cell Stem Cell. 2020 Jun 4;26(6):896-909.e8.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA