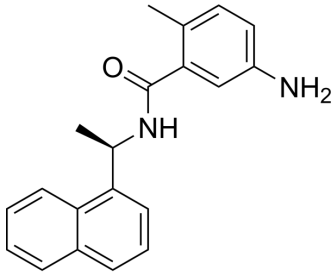
GRL0617

Cat. No.:	HY-117043
CAS No.:	1093070-16-6
Molecular Formula:	$C_{20}H_{20}N_2O$
Molecular Weight:	304.39
Target:	Deubiquitinase; SARS-CoV
Pathway:	Cell Cycle/DNA Damage; Anti-infection
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 (410.66 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2853 mL	16.4263 mL	32.8526 mL
	5 mM	0.6571 mL	3.2853 mL	6.5705 mL
	10 mM	0.3285 mL	1.6426 mL	3.2853 mL

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

In Vivo

1. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: 2.5 mg/mL (8.21 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.83 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.83 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GRL0617 is a selective and competitive noncovalent inhibitor of severe acute respiratory syndrome (SARS-CoV) papain-like protease (PLpro), with an IC_{50} of 0.6 μM and a *Ki* value of 0.49 μM. GRL0617 also inhibits SARS-CoV with an EC_{50} of 14.5 μM. GRL0617 can be used for the research of severe acute respiratory syndrome[1].

IC_{50} & Target

IC50: 0.6 μM (SARS-CoV PLpro)[1]

In Vitro

GRL0617 (0-50 μM; 48 h) exibits significantly antiviral activity in SARS-CoV infected Vero E6 cells[1].

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

Cell Viability Assay[1]

Cell Line:	Vero E6 cells
Concentration:	0, 10, 20, 30, 40 and 50 μM
Incubation Time:	48 hours
Result:	Showed significant antiviral activity in SARS-CoV infected Vero E6 cells with an EC_{50} value of 14.5 μM.

CUSTOMER VALIDATION

- Nat Commun. 2021 Jan 20;12(1):488.
- Nucleic Acids Res. 2021 Jan 8;49(D1):D1113-D1121.
- Acta Pharm Sin B. 2021 Jan;11(1):237-245.
- Cell Chem Biol. 2022 Jun 9;S2451-9456(22)00201-X.
- Cell Chem Biol. 2021 Apr 27;S2451-9456(21)00213-0.

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REFERENCES

[1]. Ratia K, et al. A noncovalent class of papain-like protease/deubiquitinase inhibitors blocks SARS virus replication. Proc Natl Acad Sci U S A. 2008 Oct 21;105(42):16119-24.

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

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